WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

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Massachusetts Department of
Environmental Protection
Bureau of Waste Site Cleanup
Northeast Regional Office
205B Lowell Street
Wilmington, MA 01887

January 23, 2012
ECS Project No. 05-216613

RE: Release Abatement Measure Status Report
Former Bay State Smelting Company, Inc.
15A Bleachery Court
Somerville, MA
RTN 3-11753

To Whom It May Concern:

A Release Abatement Measure (RAM) Status Report has been prepared by Environmental Compliance Services, Inc. (ECS), on behalf of the City of Somerville for the above-referenced location herein referred to as the Site. This RAM Status Report has been prepared in accordance with the requirements of 310 CMR 40.0466, the Massachusetts Contingency Plan (MCP). The RAM Plan was submitted on September 23, 2011 in order to manage soils during construction activities on a Massachusetts Department of Environmental Protection (MassDEP) listed disposal site with a Class A-3 Response Action Outcome (RAO) and Activity and Use Limitation (AUL). RAM activities conducted during this period include monitoring during soil excavation activities, soil excavation and disposal.

1.0 RELEASE OF OHM, SITE CONDITIONS AND SURROUNDING RECEPTORS

1.1 Site Description

The Site is located at 15A Bleachery Court in Somerville, Massachusetts, within the boundaries of Conway Park, and was previously used as an outdoor street hockey rink. Universal Transverse Mercator (UTM) coordinates for the Site are 19 468814 meters North and 325834 meters East. The Site latitude is 42°19'55" North, and the Site longitude is 71°06'53" West. A Site Locus is provided as Figure 1, and a Site Plan is provided as Figure 2.

The Site is surrounded by paved parking to the north, outdoor basketball courts to the east, beyond which is Somerville Avenue, an MDC ice hockey rink facility to the south, and a paved driveway and landscaping to the west, beyond which is a rail line. The Site is in the location of a former outdoor skating rink which was removed during RAM activities and is being replaced with an indoor ice skating rink building. This use is consistent with the existing AUL. A location of the skating rink building is indicated on Figure 2.

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1.2 Surrounding Receptors

According to the Massachusetts GIS MCP 21E Site Scoring Map for the Site, the Site is a Protected Open Space. The Site is not located in a Zone II Area, Interim Wellhead Protection Area, Zone A Area, or a medium or high yield potentially productive aquifer (PPA). The Site is not mapped within the boundaries of a Current or Potential Drinking Water Source Area or U.S. Environmental Protection Agency (EPA) Sole Source Aquifer. The Site is located more than 500 feet (ft) from areas designated as Areas of Critical Environmental Concern, Protected Open Space, Species of Special Concern and Threatened or Endangered Species Habitats. The Site is also located more than 500 ft from areas designated as Certified Vernal Pools, Outstanding Resource Waters and Wetlands Habitat.

1.3 Release of Oil and Hazardous Materials (OHM)

The former Bay State Smelting Company, Inc. was located at 15A Bleachery Court. A release of No. 2 fuel oil was noted in 1994 during the removal of a 1,000-gallon underground storage tank (UST) and RTN 3-11753 was assigned. The UST was located beneath a concrete floor near the northwest corner of the former Bay State Smelting building. The location of the USTs is shown on Figure 2.

Soils were excavated in 1994 under an immediate response action (IRA) approved for the excavation and disposal of up to 100 cubic yards of soil. Soils at the bottom of the UST excavation exhibited petroleum odors and visual evidence of staining. Additional soils could not be removed due to the presence of a building foundation.

Subsequent environmental investigations were conducted at the Site. Metals were detected in soils, resulting in the issuance of a Notice of Responsibility, but no RTN was assigned. During demolition activities conducted in 1997, a 1,200 gallon UST was punctured and approximately 275-gallons of “kerosene like” product were released. Cleanup activities were conducted, but oil was found in a perched water table triggering an IRA and the issuance of RTN 3-14924. Subsequent assessment indicated that groundwater had not been impacted and a RAO was submitted in March 1998.

In October 1997 during site monitoring activities, light non-aqueous phase liquid (LNAPL) was measured at thickness of two feet in Well 4 (located in the upgradient southwest corner of the property). RTN 3-15632 was issued. An assessment only IRA was conducted, including the installation of additional monitoring wells. LNAPL was measured in newly installed Well A (located north of the former building footprint) in June 1998, and RTN 3-16884 was assigned. LNAPL was identified as a “fresh No. 2 fuel oil”. LNAPL was also detected in well 4 (located in the southwest corner of the former foundry building, in the area of former USTs).

A product monitoring/recovery system was installed under the Remedial Implementation Plan, and was subsequently decommissioned as LNAPL was no longer measured in the wells at the Site. A Downgradient Property Status Opinion and IRA Completion Report was submitted in June 1999 for the two RTNs. Groundwater was inferred to flow in an easterly direction.

RAM Activities, EPH and Metal Contaminated Soil

Extractable Petroleum Hydrocarbon (EPH), volatile organic compounds (VOCs), and metals, including lead, arsenic, cadmium, chromium, were detected in soil samples collected from

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beneath and just beyond the former Bay State Smelting Building footprint. A RAM was implemented and excavation activities were conducted from December 1997 through April 1998, as summarized below.

Based on ECS' review of the RAM Completion Report and a Phase I – Initial Site Investigation Report completed in 1995, RAM activities were conducted beneath the former Bay State Smelting building in the areas of the former Ball Mill/Baghouse Area (and former USTs), Former Crushing Shedding Area, Former Incinerator Area and Truck Shed. The exact locations, depths and areal extent of excavations was not provided in the RAMC report.

- Excavation and of-site transport and disposal of approximately 60 cubic yards of soil/material. This soil/material exceeded the DEP landfill reuse/disposal criteria and was transported for offsite treatment and disposal as hazardous waste to Mill Service Inc. in Pennsylvania.
- On-site treatment (stabilization) and off-site disposal of contaminated soil using asphalt emulsion soil mixture fixation technology. This reportedly included the excavation, treatment and confirmatory testing of approximately 619 cubic yards of soil whose total lead values were less than the DEP landfill reuse/disposal criteria of 2,000 mg/kg. Soils were disposed at the BFI landfill in Fall River, Massachusetts.
- Off-site disposal of approximately 90 cubic yards (130.5 tons) of soil and debris from the site, of which 64 tons was successfully stabilized on-site, but the lead levels of 2,740 mg/kg exceeded the DEP landfill reuse/disposal criteria of 2,000 mg/kg. 96.9 tons was transported to Mill Service, Inc. in Pennsylvania and the remaining 33.5 tons was transported to Aggregate Recycling in Eliot, Maine.

Class A-3 RAO and AUL, Comprehensive Environmental, September 2000

The remaining RTNs were linked to RTN 3-11753, and a Class A3 RAO was submitted in September 2000. Results of the Method 3 Risk Characterization indicated that a condition of No Significant Risk exists at the Site under current and future activities.

The soil analytical data presented in the RAO was referenced to a grid on their Site Plan as a means of identifying sample locations beneath the former foundry building. Analytical results for soils remaining on-site following the completion of the excavation activities indicated that with the exception of indeno(1,2,3-cd)pyrene in surficial soils at sample location J10, antimony at location A10, arsenic at location G10, lead at locations A4, J4 and J10, C_9-C_{18} aliphatics and C_{11}-C_{22} aromatics at Well A1, concentrations of petroleum hydrocarbons, PAHs and metals were below the applicable MCP Method 1 S-1/GW-3 standards. This data was provided in the RAM Plan submitted in September 2011. These grid locations are indicated on Figure 1.

According to the RAO, although contaminant concentrations in soils exceed applicable standards, these soils are inaccessible due to the redevelopment of the site with pavement or concrete covering nearly 95% of the parcel. In those areas not covered with asphalt or concrete, a minimum of three feet of clean cover material was placed. An Activity and Use Limitation (AUL) was implemented to ensure a level of no significant risk under future conditions. The restricted areas, as defined in the AUL, are a) the subsurface soils below the pavement which covers approximately 95% of the site and b) the subsurface soils deeper than three feet in the tree pits and small landscaped areas in various locations which collectively comprise the remaining 5% of the Site.

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According to the Phase IV Implementation of the Selected Remedial Action Alternative and Response Action Outcome Statement Report (September 2000), "at a minimum, the site was filled and covered with approximately 4,000 cubic yards of imported clean fill with one foot of sub base gravel bedding. In accordance with DEP guidelines, the landscaped areas were constructed with a total of three feet of clean cover and loam material". Since the filing of the RAO the Site has been utilized as a street hockey court and parking area, with minor landscaped areas. The site is now a construction area, surrounded by a chain link fence while the building is being constructed

2.0 DESCRIPTION OF RAM ACTIVITIES

A RAM Plan was submitted by ECS to MassDEP on September 23, 2011 by the City for the purpose of managing petroleum and heavy metal contaminated soil impacted soil during scheduled site activities.

2.1 Soil Excavation and Assessment

Soil excavation activities commenced on September 28, 2011 and continued through the week of January 16, 2012. As of January 18, 2012, the following activities had been completed: the building footings excavated and poured, the building slab area was prepared (unsuitable materials removed to a depth of 24 inches and replaced with dense grade and/or stone), and underground water, gas and electric lines installation. Footings were excavated to maximum depths of eight feet (ft) below ground surface (bgs) and gas and electric utilities to a maximum depth of three ft bgs and water to depths of six to seven ft bgs.

ECS personnel were on site during the footing excavation activities to observe site soil conditions and screen site soils. ECS personnel collected soil samples from each sidewall of the building footing excavations at 3-4 and 8 ft bgs depth intervals and screened them onsite using a photoinization detector (PID). Sample locations are shown on Figure 2 and PID readings are summarized in Table 1.

PID readings in samples collected from three and four ft bgs ranged from 0 in several samples to 7.5 parts per million (ppm) at sample SW-E-1(4'). PID readings in samples collected from six and eight ft bgs ranged from 0 at several locations to 11.2 at SW2-W-1(8'). In general, PID readings exceeding 5 ppm were detected in the soil samples collected from the footings advanced in the western portion of the proposed building (F-S-6(8'), SW-W and SW-E and SW2-W and SW2-E.

Select soil samples (F-3-S(8'), F-S-5(8'), F-N-6(8') and F-N-11(8'))were submitted for laboratory analysis of VOCs by EPA Method 8260. Samples were selected to provide coverage over the entire building footprint. Sample F-S-6(8') was also analyzed for EPH, as a petroleum odor was noted in this sample and the one collected at a depth of 4 feet at this location (F-S-6(4')) during excavation. Petroleum odors and/or staining were not observed at any other sample location.

No VOCs were detected above laboratory reporting detection limits (RDLs) in soil samples F-3-S(8') and F-S-5(8'). Five petroleum-related VOCs (n-butylbenzene, sec-butylbenzene, tert-butylbenzene, isopropylbenzene and n-propylbenzene) were detected in soil samples F-N-6(8') and F-N-11(8') at concentrations above RDLs. There are no Method 1 Soil Standards for these compounds. The detected concentrations of tert-butlybenzene and n-propylbenzene are below their respective MCP Reportable Concentrations. The compounds sec-butylbenzene, tert-butylbenzene, isopropylbenzene and n-propylbenzene were previously detected in samples S-11 and A1, as reported in the 2000 RAO.

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C_9-C_{18} aliphatic and C_{11}-C_{22} aromatic hydrocarbons were detected in sample F-N-6(8') at concentrations of 4,380 mg/kg and 1,330 mg/kg, respectively. These concentrations exceed their applicable MCP Method 1 S-1/GW-2 Soil Standards. However, the concentrations are similar to those detected in soil samples collected from the groundwater interface at Well 4 and Well A1 in 1997 and 1998, respectively. These wells were located in the former UST area. In a memorandum dated June 2, 2000, to the MassDEP from Comprehensive Environmental Inc., for RTN 3-15632 and 3-16884, the presence of LNAPL at the site at that time was attributed to offsite sources that may have migrated along the sewer line and other utilities from Garden Court.

EST Associates, consultant to DeIulis Brothers Construction Co. Inc., the General Contractor, collected three insitu soil samples from test pits (TP-1, TP-2 and TP-3) advanced to a depth of 3 ft bgs in the eastern portion of the building area for pre-characterization for soil disposal. These samples were also analyzed for VOCs. No VOCs were detected above laboratory RDLs in soil samples collected from TP-2 and TP-3. Naphthalene and 4-methyl-2-pentanone were the only VOCs detected above RDLs in the soil sample collected from TP-1. The concentration of naphthalene was 0.499 mg/kg, which is below the MCP Method 1 S-1/GW-2 standard. There is no applicable standard for 4-methyl-2-pentanone. Analytical reports are attached.

In the RAM Plan, ECS utilized Figure 1-1 of the MassDEP Vapor Intrusion Guidance to determine whether additional evaluation of the vapor intrusion pathway is warranted. It was concluded that based on historical data that the vapor intrusion pathway was assumed pose deminimus risk based on available data in the September 2000 RAO. ECS will continue to evaluate this pathway. The results of PID readings and laboratory analytical data, as well as site observations during excavation activities, support this conclusion.

2.2 Dewatering Activities

Groundwater was not encountered during excavation activities. Therefore, dewatering was not conducted.

3.0 REMEDIATION WASTE MANAGEMENT

Excavated soil unsuitable per a geotechnical basis for reuse on the site was transported by Konan Trucking, Inc. to News of Worcester/Green Street Lined Landfill in Worcester, Massachusetts for use as landfill shaping and grading material. Following characterization for the permit facility requirements, 748.38 tons was transported via a total of 29 loads on October 27, 28, and 31 and November 1 and 2, 2011 under a Bill of Lading (BOL). Approximately 812.69 tons was transported via a total of 32 loads on November 21, 22, 23 and 25, 2011 under a separate BOL. Approximately 863.9 tons was transported via a total of 34 loads on December 7, 8, 9, and 12, 2011 under a third BOL. Note that the tonnage estimated on the BOLs was exceeded for soils transported under the second and third BOLs due to excess moisture content caused by rains. The soil stockpiles were characterized for this tonnage and the facility accepted the soil. Completed BOLs were submitted via eDEP (eDEP transmittal numbers 444187, 444197 and 444207) on January 13, 2012.

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4.0 RAM MODIFICATION

ECS estimated a total of 1,300 cubic yards (approx. 1,950 tons) would be generated during the construction activities at the Site and at the time provided certification that it had the financial resources to manage the excavated materials in the manner and timeframes specified in 310 CMR 40.0030. During this construction process, approximately 2,425 tons of soil has been generated in areas of the footings and utilities were transported to News of Worcester/Green Street Lined Landfill for landfill shaping and grading. Additional excavation activities are planned, and as such, ECS requests to modify the soil volume to 4,000 tons.

5.0 FUTURE RAM ACTIVITIES/PROJECT SCHEDULE

The project schedule is as follows;

- Excavation for and installation of the sewer lines are planned for February 2012.
- The building slab will poured in the spring.
- Submittal of a RAM Completion Report prior to July 2012.

If there are any questions regarding this RAM Status Report, please do not hesitate to contact the undersigned at (781) 246-8897.

Sincerely,
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Kathleen Baxter, PG
Project Manager

Craig R. Ellis
Licensed Site Professional

FIGURES:

Figure 1 – Site Plan
Figure 2 – Site Plan with RAM Soil Sampling Locations

TABLES:

Table 1 - Concentrations of PID Field Screening
Table 2 - Concentrations of VOCs in Soil Samples
Table 3 - Concentrations of EPH in Soil Samples

ATTACHMENTS:

Attachment I Laboratory Certificates

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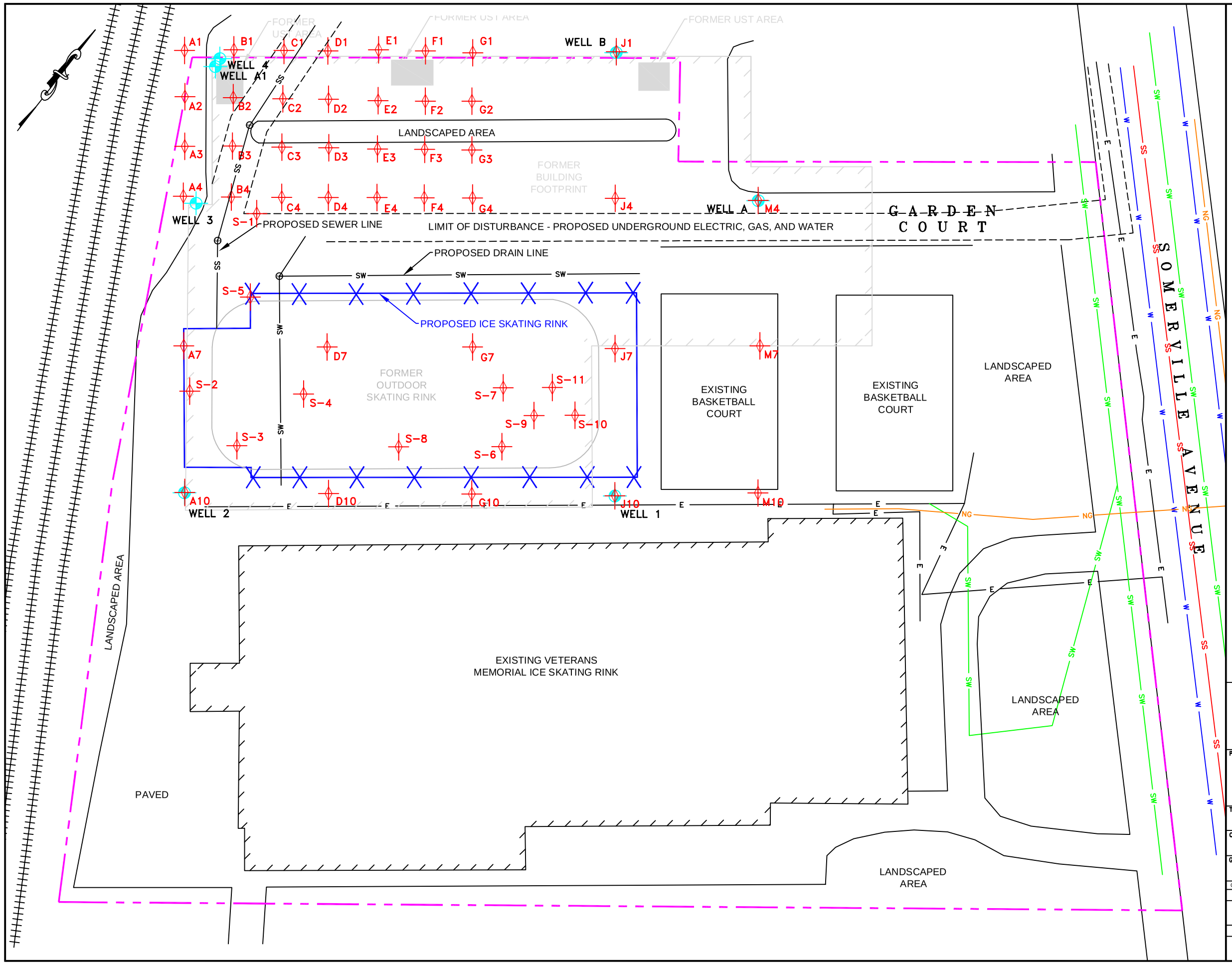

Legend

- Approximate Property Line
- Sanitary Sewer Line
- Storm Sewer Line
- Water Line
- Natural Gas Line
- Underground Electric Line
- Limit of Disturbance
- Railroad Tracks
- Proposed Building Footing
- Proposed Manhole
- Former Soil Boring
- Former Monitoring Well
- WELL-1 Well I.D.

General Notes:

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Horizontal, and vertical locations of wells, and selected site features determined through measurements made by representatives of ECS.

Site plan provided for reference by Maguire Group, Inc., dated 6/29/11 and Clean Harbors Environmental Services, Inc. Aerial provided for reference by Google Earth, dated 4/2/1995 and 6/18/2010.

ecs
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Phone: 781-246-8897 Fax: 781-246-8950

PROJECT:
Conway Park
15A Bleachery Court
Somerville, Massachusetts

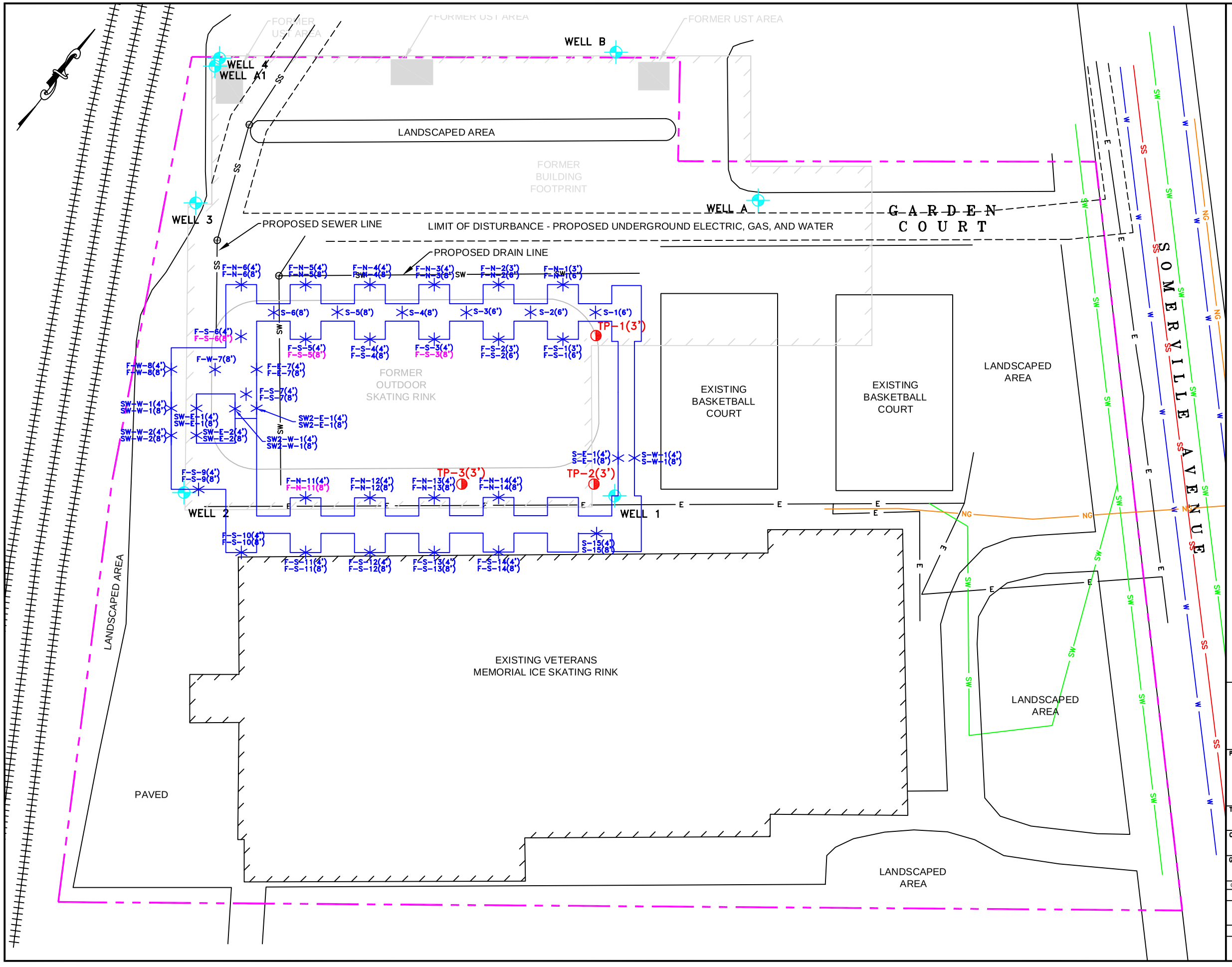
TITLE:
SITE PLAN

CLIENT:
City of Somerville

GRAPHIC SCALE: 40 20 0 20 40

COMPUTER CADFILE : CADFILE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
KZ	--	KB	CE
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
1"=40'	SEPT 2011	05-216613	1



Legend

- Approximate Property Line
- SS — Sanitary Sewer Line
- SW — Storm Sewer Line
- W — Water Line
- NG — Natural Gas Line
- E — Underground Electric Line
- Limit of Disturbance
- Railroad Tracks
- Footing/Trench Location
- MH — Proposed Manhole
- Former Monitoring Well
- EST Test Pit Location
- WELL-1 — Well I.D.
- F-S-5(4') — Soil Sample Location
- F-S-5(4') — Soil Sample Submitted for Laboratory Analysis

General Notes:

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Horizontal, and vertical locations of wells, and selected site features determined through measurements made by representatives of ECS.

Site plan provided for reference by Maguire Group, Inc., dated 6/29/11 and Clean Harbors Environmental Services, Inc. Aerial provided for reference by Google Earth, dated 4/2/1995 and 6/18/2010.

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Phone: 781-246-8897 Fax: 781-246-8950

PROJECT:
Conway Park
15A Bleachery Court
Somerville, Massachusetts

TITLE:
SITE PLAN

CLIENT:
City of Somerville

GRAPHIC SCALE: 40 20 0 20 40

COMPUTER CADFILE: CADFILE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
KZ	--	KB	CE
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
1"=40'	JAN 2012	05-216613	2

Project #: 05-216613
City of Somerville
Conway Park
Blearchery Court
Somerville, MA

Table 1
Summary of
Photoionization Detector (PID)
Field Screening (ppmv)

Date	Sample ID	PID Reading	Date	Sample ID	PID Reading	Date	Sample ID	PID Reading
9/28/11	S-1(6')	2.1	10/6/2011	S-6(8')	3.3	10/21/2011	F-W-9(4')	1.3
	F-1-S(3')	1.0		F-N-6(4')	1.2		F-W-9(8')	2.2
	F-1-S(6')	2.1		F-N-6(8')	3.6		F-S-9(4')	1.8
	F-1-N(3')	1.4		F-S-6(4')	2.7		F-S-9(8')	1.3
	F-1-N(6')	2.1		F-S-6(8')	9.8			
	S-2(6')	2.1				11/1/2011	F-S-9(4')	0.3
	F-2-S(3')	1.0	10/11/2011	F-S-7(4')	2.7		F-S-9(8')	0.3
	F-2-S(6')	1.0		F-S-7(8')	4.3		F-S-10(4')	0.7
	F-2-N(3')	0.7		F-W-7(8')	0.9		F-S-10(8')	1.3
	F-2-N(6')	0.0		F-E-7(4')	0.9			
	S-3(7')	0.0		F-E-7(8')	1.3	11/3/2011	F-N-11(4')	0.7
	S-3(8')	0.0					F-N-11(8')	6.2
	F-3-S(4')	0.0	10/12/2011	F-W-8(4')	2.3		F-S-11(4')	2.7
	F-3-S(8')	0.0		F-W-8(8')	5.0		F-S-11(8')	1.5
	F-3-N(4')	0.3						
	F-3-N(8')	0.3	10/17/2011	SW-W-1(4')	7.0	11/7/2011	F-N-12(4')	1.1
				SW-W-1(8')	9.8		F-N-12(8')	1.1
10/3/11	S-4(8')	3.4		SW-E-1(4')	7.5		F-S-12(4')	0.7
	F-4-S(4')	2.1		SW-E-1(8')	10.3		F-S-12(8')	0.7
	F-4-S(8')	0.3						
	F-4-N(4')	3.0	10/18/2011	SW2-W-1(4')	8.4	11/10/2011	F-N-14(4')	0.3
	F-4-N(8')	2.4		SW2-W-1(8')	11.2		F-N-14(8')	0.6
				SW2-E-1(4')	6.0		F-S-14(4')	0.0
10/5/11	S-5(8')	0.3		SW2-E-1(8')	7.0		F-S-14(8')	0.3
	F-S-5(4')	3.3						
	F-S-5(8')	3.7	10/19/2011	SW-W-2(4')	1.8	11/16/2011	S-15(4')	0.0
	F-N-5(4')	2.4		SW-W--2(8')	5.6		S-15(8')	0.0
	F-N-5(8')	3.7		SW-E-2(4')	1.8			
				SW-E-2(8')	3.2	11/18/2011	S-W-1(4')	0.0
							S-W-1(8')	0.3
							S-E-1(4')	0.9
							S-E-1(8')	0.6

Project #: 05-216613
City of Somerville
Conway Park
Bleachery Court
Somerville, MA

Table 2
Concentrations of
Volatile Organic Compounds (VOCs)
Detected in Soil Samples
(USEPA Method 8260)

Sample Location	**F-3-S (8')**	**F-S-5 (8')**	**F-S-6 (8')**	**F-N-11 (8')**	**TP-1**	**TP-2**	**TP-3**	**MCP Method 1 Soil Standards**					
Sampling Date	**9/28/11**	**10/5/11**	**10/6/11**	**11/3/2011**	**12/15/2011**	**12/15/2011**	**12/15/2011**						
Sample Depth	**8'**	**8'**	**8'**	**8'**	**3'**	**3'**	**3'**	**S-1/GW-2**	**S-1/GW-3**	**S-2/GW-2**	**S-2/GW-3**	**S-3/GW-2**	**S-3/GW-3**
Volatile Organic Compounds (ug/kg)	**Results/Method Detection Limits**												
Acetone	ND/786	ND/56.1	ND/3360	ND/6380	ND/142	ND/137	ND/137	50,000	400,000	50,000	400,000	50,000	400,000
Acrylonitrile	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Benzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	30,000	30,000	200,000	200,000	700,000	900,000
Bromobenzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Bromochloromethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/142	ND/137	ND/137	NS	NS	NS	NS	NS	NS
Bromodichloromethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	100.0	20,000	100	100,000	100	500,000
Bromoform	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	1,000	200,000	1,000	800,000	1,000	800,000
Bromomethane	ND/157	ND/11.2	ND/672	ND/1280	ND/56.8	ND/54.9	ND/54.9	500	30,000	500	30,000	500	30,000
2-Butanone (MEK)	ND/786	ND/56.1	ND/3360	ND/6380	ND/142	ND/137	ND/137	50,000	400,000	50,000	400,000	50,000	400,000
n-Butylbenzene	ND/78.6	ND/5.6	7,380	10,200	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
sec-Butylbenzene	ND/78.6	ND/5.6	7,020	7,410	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
tert-Butylbenzene	ND/78.6	ND/5.6	477	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Carbon disulfide	ND/157	ND/11.2	ND/672	ND/1280	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Carbon tetrachloride	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	5,000	10,000	5,000	60,000	5,000	400,000
Chlorobenzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	3,000	100,000	3,000	100,000	3,000	100,000
Chloroethane	ND/157	ND/11.2	ND/672	ND/1280	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Chloroform	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	300	400,000	300	800,000	300	800,000
Chloromethane	ND/157	ND/11.2	ND/672	ND/1280	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
2-Chlorotoluene	ND/78.6	ND/5.6	ND/336	ND/638	ND/142	ND/137	ND/137	NS	NS	NS	NS	NS	NS
4-Chlorotoluene	ND/78.6	ND/5.6	ND/336	ND/638	ND/142	ND/137	ND/137	NS	NS	NS	NS	NS	NS
1,2-Dibromo-3-chloropropane (DBCP)	ND/157	ND/11.2	ND/672	ND/1280	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Dibromochloromethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
1,2-Dibromoethane (EDB)	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	100	700	100	4,000	100	30,000
Dibromomethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	30,000	300,000	30,000	300,000	30,000	300,000
1,3-Dichlorobenzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	40,000	100,000	40,000	500,000	40,000	500,000
1,4-Dichlorobenzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	4,000	50,000	4,000	300,000	4,000	2,000,000
Dichlorodifluoromethane	ND/157	ND/11.2	ND/672	ND/1280	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/142	ND/137	ND/137	5,000	500,000	5,000	1,000,000	5,000	1,000,000
1,2-Dichloroethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	100	10,000	100	90,000	100	300,000
1,1-Dichloroethene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	40,000	500,000	40,000	1,000,000	40,000	3,000,000
cis-1,2-dichloroethene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	400	100,000	400	500,000	400	500,000
trans-1,2-dichloroethene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	1,000	500,000	1,000	1,000,000	1,000	3,000,000
1,2-Dichloropropane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	100	10,000	100	100,000	100	600,000
1,3-Dichloropropane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
2,2-Dichloropropane	ND/78.6	ND/5.6	ND/336	ND/638	ND/142	ND/137	ND/137	NS	NS	NS	NS	NS	NS
1,1-Dichloropropane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
cis-1,3-Dichloropropene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	**400**	9,000	400	70,000	**400**	100,000
trans-1,3-Dichloropropene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9						
Ethylbenzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	500,000	500,000	1,000,000	100,000	1,000,000	3,000,000
Hexachlorobutadiene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	6,000	6,000	90,000	90,000	100,000	100,000
2-Hexanone (MBK)	ND/786	ND/56.1	ND/3360	ND/6380	ND/142	ND/137	ND/137	NS	NS	NS	NS	NS	NS
Isopropylbenzene	ND/78.6	ND/5.6	2,110	1,720	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
4-Isopropyltoluene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Methyl-tert-butyl-ether (MTBE)	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	100,000	100,000	100,000	500,000	100,000	500,000
4-Methyl-2-pentanone (MIBK)	ND/786	ND/56.1	ND/3360	ND/6380	57.4	ND/54.9	ND/54.9	50,000	400,000	50,000	400,000	50,000	400,000
Methylene chloride	ND/157	ND/11.2	ND/672	ND/1280	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Naphthalene	ND/78.6	ND/5.6	ND/336	ND/638	499	ND/137	ND/137	40,000	500,000	40,000	1,000,000	40,000	3,000,000
n-Propylbenzene	ND/78.6	ND/5.6	4,950	5,220	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Styrene	ND/78.6	ND/5.6	ND/336	ND/638	ND/142	ND/137	ND/137	4,000	30,000	4,000	200,000	4,000	1,000,000
1,1,1,2-Tetrachloroethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	100	7,000	100	100,000	100	300,000
1,1,2,2-Tetrachloroethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	20	800	20	10,000	20	40,000
Tetrachloroethene (PCE)	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	10,000	30,000	10,000	200,000	10,000	1,000,000
Toluene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	500,000	500,000	1,000,000	1,000,000	2,000,000	3,000,000
1,2,3-Trichlorobenzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
1,2,4-Trichlorobenzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	70,000	500,000	70,000	900,000	70,000	900,000
1,1,1-Trichloroethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	500,000	500,000	600,000	1,000,000	600,000	3,000,000
1,1,2-Trichloroethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	2,000	4,000	2,000	60,000	2,000	200,000
Trichloroethene (TCE)	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	2,000	90,000	2,000	700,000	2,000	2,000,000
Trichlorofluoromethane	ND/78.6	ND/5.6	ND/336	ND/638	ND/142	ND/137	ND/137	NS	NS	NS	NS	NS	NS
1,2,3-Trichloropropane	ND/78.6	ND/5.6	ND/336	ND/638	NA	NA	NA	NS	NS	NS	NS	NS	NS
1,2,4-Trimethylbenzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
1,3,5-Trimethylbenzene	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Vinyl chloride	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	600.0	600.0	700	4,000	700	30,000
m,p- Xylenes	ND/157	ND/11.2	ND/672	ND/1280	ND/142	ND/137	ND/137	300,000	500,000	300,000	1,000,000	300,000	3,000,000
o-Xylene	ND/78.6	ND/5.6	ND/336	ND/638									
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND/78.6	ND/5.6	ND/336	ND/638	NA	NA	NA	NS	NS	NS	NS	NS	NS
Tetrahydrofuran	ND/157	ND/11.2	ND/672	ND/638	ND/142	ND/137	ND/137	NS	NS	NS	NS	NS	NS
Ethyl ether	ND/78.6	ND/5.6	ND/336	ND/638	NA	NA	NA	NS	NS	NS	NS	NS	NS
Tert-amyl methyl ether	ND/78.6	ND/5.6	ND/336	ND/638	NA	NA	NA	NS	NS	NS	NS	NS	NS
Ethyl tert-butyl ether	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Di-isopropyl ether	ND/78.6	ND/5.6	ND/336	ND/638	ND/56.8	ND/54.9	ND/54.9	NS	NS	NS	NS	NS	NS
Tert-Butanol / butyl alcohol	ND/786	ND/56.1	ND/3360	ND/6380	NA	NA	NA	NS	NS	NS	NS	NS	NS
1,4-Dioxane	ND/1570	ND/112	ND/6720	ND/12800	NA	NA	NA	6,000	70,000	6,000	500,000	6,000	500,000
trans-1,-Dichloro-2-butene	ND/393	ND/28.0	ND/1680	ND/3190	NA	NA	NA	NS	NS	NS	NS	NS	NS

NOTES:

NA = target analyte Not Analyzed.

ND/5.0 = target analyte Not Detected above the noted detection limit.

NS = No Standard.

Bold indicates target analyte exceeds the MCP Method 1 Risk Based Standards.

Reportable Concentrations are excerpted from 310 CMR 40.1600 Table 1.

MCP Method 1 Risk Standards are excerpted from 310 CMR 40.0975(6)(a) Table 2 and 310 CMR 40.0975(6)(b) Table 3.

Project #: 05-216613 **City of Somerville** **Conway Park** **Bleachery Court** **Somerville, MA**	**Table 3** **Concentrations of Extractable Petroleum Hydrocarbons** **Detected in Soil Samples**						
Sample Location	**F-S-6 (8')**						
Date	**9/28/11**						
Depth	**8'**	**S-1/GW-2**	**S-1/GW-3**	**S-2/GW-2**	**S-2/GW-3**	**S-3/GW-2**	**S-3/GW-3**
EPH Fractions (mg/kg)	**Results/Method Detection Limits**						
C_9-C_{18} Aliphatics	4,380	1,000	1,000	3,000	3,000	5,000	5,000
C_{19}-C_{36} Aliphatics	585	3,000	3,000	5,000	5,000	5,000	5,000
C_{11}-C_{22} Aromatics	1,330	1,000	1,000	3,000	3,000	5,000	5,000
EPH Target Analytes (ug/kg)							
Acenaphthene	2.85	1,000,000	1,000,000	3,000,000	3,000,000	5,000,000	5,000,000
Acenaphthylene	ND/0.380	600,000	10,000	600,000	10,000	600,000	10,000
Anthracene	0.967	1,000,000	1,000,000	3,000,000	3,000,000	5,000,000	5,000,000
Benzo (a) anthracene	ND/0.380	7,000	7,000	40,000	40,000	300,000	300,000
Benzo (b) fluoranthene	ND/0.380	7,000	7,000	40,000	40,000	300,000	300,000
Benzo (k) fluoranthene	ND/0.380	70,000	70,000	400,000	400,000	3,000,000	3,000,000
Benzo (a) pyrene	ND/0.380	2,000	2,000	4,000	4,000	30,000	30,000
Benzo (g,h,i) perylene	ND/0.380	1,000,000	1,000,000	3,000,000	3,000,000	5,000,000	5,000,000
Chrysene	ND/0.380	70,000	70,000	400,000	400,000	3,000,000	3,000,000
Dibenzo (a,h) anthracene	ND/0.380	700	700	4,000	4,000	30,000	30,000
Fluoranthene	0.864	1,000,000	1,000,000	3,000,000	3,000,000	5,000,000	5,000,000
Fluorene	3.48	1,000,000	1,000,000	3,000,000	3,000,000	5,000,000	5,000,000
Indeno (1,2,3-cd) pyrene	ND.0.380	7,000	7,000	40,000	40,000	300,000	300,000
2-Methylnaphthalene	13.3	80,000	300,000	80,000	500,000	80,000	500,000
Naphthalene	ND/0.380	40,000	500,000	40,000	1,000,000	40,000	3,000,000
Phenanthrene	7.25	500,000	500,000	1,000,000	1,000,000	3,000,000	3,000,000
Pyrene	0.906	1,000,000	1,000,000	3,000,000	3,000,000	5,000,000	5,000,000

NOTES:

NA = target analyte Not Analyzed.

ND/5.0 = target analyte Not Detected above the noted detection limit.

NS = No Standard.

Bold indicates target analyte exceeds the MCP Method 1 Risk Based Standards.

Reportable Concentrations are excerpted from 310 CMR 40.1600 Table 1.

MCP Method 1 Risk Standards are excerpted from 310 CMR 40.0975(6)(a) Table 2 and 310 CMR 40.0975(6)(b) Table 3.

Report Date:
14-Oct-11 12:19

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Environmental Compliance Services
10 State Street
Woburn, MA 01801
Attn: Kathy Baxter

Project: Conway Park - Somerville, MA
Project #: 05-216613

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SB36871-01	F-3-S (8')	Soil	28-Sep-11 14:30	04-Oct-11 17:28

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.
Please note that this report contains 12 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 4.1 degrees Celsius. The condition of these samples was further noted as refrigerated. The samples were transported on ice to the laboratory facility and the temperature was recorded at 2.7 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Additional dilution factors may be required to keep analyte concentration within instrument calibration.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260C

Calibration:

1109007

Analyte quantified by quadratic equation type calibration.

1,2-Dibromo-3-chloropropane
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Bromoform
cis-1,3-Dichloropropene
Dibromochloromethane
trans-1,3-Dichloropropene

This affected the following samples:

S108096-ICV1

Laboratory Control Samples:

1121017 BS/BSD

1,2-Dibromo-3-chloropropane percent recoveries (128/132) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

F-3-S (8')

Bromoform percent recoveries (129/135) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

F-3-S (8')

Samples:

S109279-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

1,1,1,2-Tetrachloroethane (20.8%)
1,2,4-Trimethylbenzene (22.1%)
1,3,5-Trimethylbenzene (22.5%)
2,2-Dichloropropane (27.7%)
Carbon tetrachloride (20.7%)
n-Butylbenzene (21.4%)
trans-1,4-Dichloro-2-butene (32.7%)

SW846 8260C

Samples:

S109279-CCV1

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

1,2-Dibromo-3-chloropropane (37.8%)
Bromodichloromethane (22.0%)
Bromoform (33.3%)
Carbon disulfide (30.8%)
Dibromochloromethane (21.1%)

This affected the following samples:

1121017-BLK1
1121017-BS1
1121017-BSD1
F-3-S (8')

SB36871-01 *F-3-S (8')*

Reporting limits reflect SW846 5030 extraction technique due to interference and/or QC issues using SW846 5035A extraction technique.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-3-S (8') SB36871-01	05-216613	Soil	28-Sep-11 14:30	04-Oct-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
	VOC Extraction	Field extracted		N/A			1	VOC Soil Extraction	06-Oct-11	06-Oct-11	BD	1120661	
Volatile Organic Compounds			VOC8										
Prepared by method SW846 5030 Soil (high level)							Initial weight: 15.05 g						
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 78.6		µg/kg dry	78.6	52.4	50	SW846 8260C	12-Oct-11	12-Oct-11	naa	1121017	
67-64-1	Acetone	< 786		µg/kg dry	786	591	50	"	"	"	"	"	
107-13-1	Acrylonitrile	< 78.6		µg/kg dry	78.6	70.3	50	"	"	"	"	"	
71-43-2	Benzene	< 78.6		µg/kg dry	78.6	41.3	50	"	"	"	"	"	
108-86-1	Bromobenzene	< 78.6		µg/kg dry	78.6	50.1	50	"	"	"	"	"	
74-97-5	Bromochloromethane	< 78.6		µg/kg dry	78.6	25.8	50	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 78.6		µg/kg dry	78.6	29.7	50	"	"	"	"	"	
75-25-2	Bromoform	< 78.6		µg/kg dry	78.6	54.3	50	"	"	"	"	"	
74-83-9	Bromomethane	< 157		µg/kg dry	157	142	50	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 786		µg/kg dry	786	674	50	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 78.6		µg/kg dry	78.6	39.2	50	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 78.6		µg/kg dry	78.6	76.2	50	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 78.6		µg/kg dry	78.6	56.8	50	"	"	"	"	"	
75-15-0	Carbon disulfide	< 157		µg/kg dry	157	112	50	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 78.6		µg/kg dry	78.6	78.1	50	"	"	"	"	"	
108-90-7	Chlorobenzene	< 78.6		µg/kg dry	78.6	43.9	50	"	"	"	"	"	
75-00-3	Chloroethane	< 157		µg/kg dry	157	111	50	"	"	"	"	"	
67-66-3	Chloroform	< 78.6		µg/kg dry	78.6	38.4	50	"	"	"	"	"	
74-87-3	Chloromethane	< 157		µg/kg dry	157	39.5	50	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 78.6		µg/kg dry	78.6	47.9	50	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 78.6		µg/kg dry	78.6	70.3	50	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 157		µg/kg dry	157	149	50	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 78.6		µg/kg dry	78.6	37.7	50	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 78.6		µg/kg dry	78.6	48.7	50	"	"	"	"	"	
74-95-3	Dibromomethane	< 78.6		µg/kg dry	78.6	78.4	50	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 78.6		µg/kg dry	78.6	63.3	50	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 78.6		µg/kg dry	78.6	78.2	50	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 78.6		µg/kg dry	78.6	53.1	50	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 157		µg/kg dry	157	133	50	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 78.6		µg/kg dry	78.6	71.8	50	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 78.6		µg/kg dry	78.6	43.9	50	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 78.6		µg/kg dry	78.6	39.0	50	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 78.6		µg/kg dry	78.6	33.0	50	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 78.6		µg/kg dry	78.6	65.2	50	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 78.6		µg/kg dry	78.6	40.0	50	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 78.6		µg/kg dry	78.6	39.5	50	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 78.6		µg/kg dry	78.6	31.7	50	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 78.6		µg/kg dry	78.6	48.5	50	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 78.6		µg/kg dry	78.6	42.8	50	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 78.6		µg/kg dry	78.6	22.2	50	"	"	"	"	"	
100-41-4	Ethylbenzene	< 78.6		µg/kg dry	78.6	47.9	50	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 78.6		µg/kg dry	78.6	67.8	50	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-3-S (8')	05-216613	Soil	28-Sep-11 14:30	04-Oct-11
SB36871-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds			VOC8										
Prepared by method SW846 5030 Soil (high level)							Initial weight: 15.05 g						
591-78-6	2-Hexanone (MBK)	< 786		µg/kg dry	786	201	50	SW846 8260C	12-Oct-11	12-Oct-11	naa	1121017	
98-82-8	Isopropylbenzene	< 78.6		µg/kg dry	78.6	39.5	50	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 78.6		µg/kg dry	78.6	32.5	50	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	< 78.6		µg/kg dry	78.6	57.1	50	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 786		µg/kg dry	786	256	50	"	"	"	"	"	
75-09-2	Methylene chloride	< 157		µg/kg dry	157	39.9	50	"	"	"	"	"	
91-20-3	Naphthalene	< 78.6		µg/kg dry	78.6	48.8	50	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 78.6		µg/kg dry	78.6	47.2	50	"	"	"	"	"	
100-42-5	Styrene	< 78.6		µg/kg dry	78.6	58.2	50	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	< 78.6		µg/kg dry	78.6	75.5	50	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 78.6		µg/kg dry	78.6	59.7	50	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 78.6		µg/kg dry	78.6	45.0	50	"	"	"	"	"	
108-88-3	Toluene	< 78.6		µg/kg dry	78.6	70.4	50	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 78.6		µg/kg dry	78.6	68.1	50	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 78.6		µg/kg dry	78.6	59.1	50	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 78.6		µg/kg dry	78.6	55.6	50	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 78.6		µg/kg dry	78.6	63.0	50	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 78.6		µg/kg dry	78.6	67.6	50	"	"	"	"	"	
79-01-6	Trichloroethene	< 78.6		µg/kg dry	78.6	60.2	50	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	< 78.6		µg/kg dry	78.6	31.8	50	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 78.6		µg/kg dry	78.6	35.5	50	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 78.6		µg/kg dry	78.6	25.7	50	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 78.6		µg/kg dry	78.6	77.9	50	"	"	"	"	"	
75-01-4	Vinyl chloride	< 78.6		µg/kg dry	78.6	73.7	50	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 157		µg/kg dry	157	152	50	"	"	"	"	"	
95-47-6	o-Xylene	< 78.6		µg/kg dry	78.6	53.7	50	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 157		µg/kg dry	157	145	50	"	"	"	"	"	
60-29-7	Ethyl ether	< 78.6		µg/kg dry	78.6	73.3	50	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	< 78.6		µg/kg dry	78.6	62.0	50	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 78.6		µg/kg dry	78.6	27.4	50	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 78.6		µg/kg dry	78.6	25.3	50	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 786		µg/kg dry	786	445	50	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 1570		µg/kg dry	1570	1290	50	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-butene	< 393		µg/kg dry	393	201	50	"	"	"	"	"	
64-17-5	Ethanol	< 31400		µg/kg dry	31400	6580	50	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*91*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*95*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*94*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*89*			*70-130 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**77.6**		%			1	SM2540 G Mod.	11-Oct-11	11-Oct-11	DT	1120918	

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* Reportable Detection Limit

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121017 - SW846 5030 Soil (high level)										
Blank (1121017-BLK1)					Prepared & Analyzed: 12-Oct-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0		µg/kg wet	50.0						
Acetone	< 500		µg/kg wet	500						
Acrylonitrile	< 50.0		µg/kg wet	50.0						
Benzene	< 50.0		µg/kg wet	50.0						
Bromobenzene	< 50.0		µg/kg wet	50.0						
Bromochloromethane	< 50.0		µg/kg wet	50.0						
Bromodichloromethane	< 50.0		µg/kg wet	50.0						
Bromoform	< 50.0		µg/kg wet	50.0						
Bromomethane	< 100		µg/kg wet	100						
2-Butanone (MEK)	< 500		µg/kg wet	500						
n-Butylbenzene	< 50.0		µg/kg wet	50.0						
sec-Butylbenzene	< 50.0		µg/kg wet	50.0						
tert-Butylbenzene	< 50.0		µg/kg wet	50.0						
Carbon disulfide	< 100		µg/kg wet	100						
Carbon tetrachloride	< 50.0		µg/kg wet	50.0						
Chlorobenzene	< 50.0		µg/kg wet	50.0						
Chloroethane	< 100		µg/kg wet	100						
Chloroform	< 50.0		µg/kg wet	50.0						
Chloromethane	< 100		µg/kg wet	100						
2-Chlorotoluene	< 50.0		µg/kg wet	50.0						
4-Chlorotoluene	< 50.0		µg/kg wet	50.0						
1,2-Dibromo-3-chloropropane	< 100		µg/kg wet	100						
Dibromochloromethane	< 50.0		µg/kg wet	50.0						
1,2-Dibromoethane (EDB)	< 50.0		µg/kg wet	50.0						
Dibromomethane	< 50.0		µg/kg wet	50.0						
1,2-Dichlorobenzene	< 50.0		µg/kg wet	50.0						
1,3-Dichlorobenzene	< 50.0		µg/kg wet	50.0						
1,4-Dichlorobenzene	< 50.0		µg/kg wet	50.0						
Dichlorodifluoromethane (Freon12)	< 100		µg/kg wet	100						
1,1-Dichloroethane	< 50.0		µg/kg wet	50.0						
1,2-Dichloroethane	< 50.0		µg/kg wet	50.0						
1,1-Dichloroethene	< 50.0		µg/kg wet	50.0						
cis-1,2-Dichloroethene	< 50.0		µg/kg wet	50.0						
trans-1,2-Dichloroethene	< 50.0		µg/kg wet	50.0						
1,2-Dichloropropane	< 50.0		µg/kg wet	50.0						
1,3-Dichloropropane	< 50.0		µg/kg wet	50.0						
2,2-Dichloropropane	< 50.0		µg/kg wet	50.0						
1,1-Dichloropropene	< 50.0		µg/kg wet	50.0						
cis-1,3-Dichloropropene	< 50.0		µg/kg wet	50.0						
trans-1,3-Dichloropropene	< 50.0		µg/kg wet	50.0						
Ethylbenzene	< 50.0		µg/kg wet	50.0						
Hexachlorobutadiene	< 50.0		µg/kg wet	50.0						
2-Hexanone (MBK)	< 500		µg/kg wet	500						
Isopropylbenzene	< 50.0		µg/kg wet	50.0						
4-Isopropyltoluene	< 50.0		µg/kg wet	50.0						
Methyl tert-butyl ether	< 50.0		µg/kg wet	50.0						
4-Methyl-2-pentanone (MIBK)	< 500		µg/kg wet	500						
Methylene chloride	< 100		µg/kg wet	100						
Naphthalene	< 50.0		µg/kg wet	50.0						
n-Propylbenzene	< 50.0		µg/kg wet	50.0						
Styrene	< 50.0		µg/kg wet	50.0						
1,1,1,2-Tetrachloroethane	< 50.0		µg/kg wet	50.0						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121017 - SW846 5030 Soil (high level)										
Blank (1121017-BLK1)					Prepared & Analyzed: 12-Oct-11					
1,1,2,2-Tetrachloroethane	< 50.0		µg/kg wet	50.0						
Tetrachloroethene	< 50.0		µg/kg wet	50.0						
Toluene	< 50.0		µg/kg wet	50.0						
1,2,3-Trichlorobenzene	< 50.0		µg/kg wet	50.0						
1,2,4-Trichlorobenzene	< 50.0		µg/kg wet	50.0						
1,3,5-Trichlorobenzene	< 50.0		µg/kg wet	50.0						
1,1,1-Trichloroethane	< 50.0		µg/kg wet	50.0						
1,1,2-Trichloroethane	< 50.0		µg/kg wet	50.0						
Trichloroethene	< 50.0		µg/kg wet	50.0						
Trichlorofluoromethane (Freon 11)	< 50.0		µg/kg wet	50.0						
1,2,3-Trichloropropane	< 50.0		µg/kg wet	50.0						
1,2,4-Trimethylbenzene	< 50.0		µg/kg wet	50.0						
1,3,5-Trimethylbenzene	< 50.0		µg/kg wet	50.0						
Vinyl chloride	< 50.0		µg/kg wet	50.0						
m,p-Xylene	< 100		µg/kg wet	100						
o-Xylene	< 50.0		µg/kg wet	50.0						
Tetrahydrofuran	< 100		µg/kg wet	100						
Ethyl ether	< 50.0		µg/kg wet	50.0						
Tert-amyl methyl ether	< 50.0		µg/kg wet	50.0						
Ethyl tert-butyl ether	< 50.0		µg/kg wet	50.0						
Di-isopropyl ether	< 50.0		µg/kg wet	50.0						
Tert-Butanol / butyl alcohol	< 500		µg/kg wet	500						
1,4-Dioxane	< 1000		µg/kg wet	1000						
trans-1,4-Dichloro-2-butene	< 250		µg/kg wet	250						
Ethanol	< 20000		µg/kg wet	20000						
Surrogate: 4-Bromofluorobenzene	*26.0*		µg/kg wet		*30.0*		*87*	*70-130*		
Surrogate: Toluene-d8	*28.8*		µg/kg wet		*30.0*		*96*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*32.8*		µg/kg wet		*30.0*		*109*	*70-130*		
Surrogate: Dibromofluoromethane	*34.1*		µg/kg wet		*30.0*		*114*	*70-130*		
LCS (1121017-BS1)					Prepared & Analyzed: 12-Oct-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**19.7**		µg/kg wet		20.0		99	70-130		
Acetone	**21.2**		µg/kg wet		20.0		106	70-130		
Acrylonitrile	**21.7**		µg/kg wet		20.0		108	70-130		
Benzene	**19.6**		µg/kg wet		20.0		98	70-130		
Bromobenzene	**20.1**		µg/kg wet		20.0		100	70-130		
Bromochloromethane	**19.3**		µg/kg wet		20.0		97	70-130		
Bromodichloromethane	**22.6**		µg/kg wet		20.0		113	70-130		
Bromoform	**25.7**		µg/kg wet		20.0		129	70-130		
Bromomethane	**20.9**		µg/kg wet		20.0		104	70-130		
2-Butanone (MEK)	**20.7**		µg/kg wet		20.0		104	70-130		
n-Butylbenzene	**21.7**		µg/kg wet		20.0		108	70-130		
sec-Butylbenzene	**22.0**		µg/kg wet		20.0		110	70-130		
tert-Butylbenzene	**21.5**		µg/kg wet		20.0		107	70-130		
Carbon disulfide	**23.9**		µg/kg wet		20.0		119	70-130		
Carbon tetrachloride	**22.6**		µg/kg wet		20.0		113	70-130		
Chlorobenzene	**19.4**		µg/kg wet		20.0		97	70-130		
Chloroethane	**20.8**		µg/kg wet		20.0		104	70-130		
Chloroform	**20.6**		µg/kg wet		20.0		103	70-130		
Chloromethane	**22.2**		µg/kg wet		20.0		111	70-130		
2-Chlorotoluene	**22.4**		µg/kg wet		20.0		112	70-130		
4-Chlorotoluene	**21.2**		µg/kg wet		20.0		106	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121017 - SW846 5030 Soil (high level)										
LCS (1121017-BS1)					Prepared & Analyzed: 12-Oct-11					
1,2-Dibromo-3-chloropropane	**25.5**		µg/kg wet		20.0		128	70-130		
Dibromochloromethane	**23.5**		µg/kg wet		20.0		118	70-130		
1,2-Dibromoethane (EDB)	**20.6**		µg/kg wet		20.0		103	70-130		
Dibromomethane	**21.4**		µg/kg wet		20.0		107	70-130		
1,2-Dichlorobenzene	**20.9**		µg/kg wet		20.0		104	70-130		
1,3-Dichlorobenzene	**21.0**		µg/kg wet		20.0		105	70-130		
1,4-Dichlorobenzene	**20.0**		µg/kg wet		20.0		100	70-130		
Dichlorodifluoromethane (Freon12)	**22.2**		µg/kg wet		20.0		111	70-130		
1,1-Dichloroethane	**19.5**		µg/kg wet		20.0		97	70-130		
1,2-Dichloroethane	**20.3**		µg/kg wet		20.0		102	70-130		
1,1-Dichloroethene	**19.8**		µg/kg wet		20.0		99	70-130		
cis-1,2-Dichloroethene	**18.8**		µg/kg wet		20.0		94	70-130		
trans-1,2-Dichloroethene	**19.6**		µg/kg wet		20.0		98	70-130		
1,2-Dichloropropane	**20.6**		µg/kg wet		20.0		103	70-130		
1,3-Dichloropropane	**20.5**		µg/kg wet		20.0		103	70-130		
2,2-Dichloropropane	**24.1**		µg/kg wet		20.0		120	70-130		
1,1-Dichloropropene	**18.8**		µg/kg wet		20.0		94	70-130		
cis-1,3-Dichloropropene	**20.6**		µg/kg wet		20.0		103	70-130		
trans-1,3-Dichloropropene	**22.7**		µg/kg wet		20.0		114	70-130		
Ethylbenzene	**20.2**		µg/kg wet		20.0		101	70-130		
Hexachlorobutadiene	**20.5**		µg/kg wet		20.0		103	70-130		
2-Hexanone (MBK)	**20.6**		µg/kg wet		20.0		103	70-130		
Isopropylbenzene	**20.4**		µg/kg wet		20.0		102	70-130		
4-Isopropyltoluene	**21.3**		µg/kg wet		20.0		106	70-130		
Methyl tert-butyl ether	**19.4**		µg/kg wet		20.0		97	70-130		
4-Methyl-2-pentanone (MIBK)	**17.6**		µg/kg wet		20.0		88	70-130		
Methylene chloride	**17.8**		µg/kg wet		20.0		89	70-130		
Naphthalene	**19.4**		µg/kg wet		20.0		97	70-130		
n-Propylbenzene	**20.9**		µg/kg wet		20.0		104	70-130		
Styrene	**18.9**		µg/kg wet		20.0		94	70-130		
1,1,1,2-Tetrachloroethane	**22.7**		µg/kg wet		20.0		113	70-130		
1,1,2,2-Tetrachloroethane	**24.3**		µg/kg wet		20.0		121	70-130		
Tetrachloroethene	**18.0**		µg/kg wet		20.0		90	70-130		
Toluene	**18.8**		µg/kg wet		20.0		94	70-130		
1,2,3-Trichlorobenzene	**21.3**		µg/kg wet		20.0		106	70-130		
1,2,4-Trichlorobenzene	**19.5**		µg/kg wet		20.0		97	70-130		
1,3,5-Trichlorobenzene	**19.1**		µg/kg wet		20.0		95	70-130		
1,1,1-Trichloroethane	**22.6**		µg/kg wet		20.0		113	70-130		
1,1,2-Trichloroethane	**20.7**		µg/kg wet		20.0		103	70-130		
Trichloroethene	**19.4**		µg/kg wet		20.0		97	70-130		
Trichlorofluoromethane (Freon 11)	**21.2**		µg/kg wet		20.0		106	70-130		
1,2,3-Trichloropropane	**21.7**		µg/kg wet		20.0		108	70-130		
1,2,4-Trimethylbenzene	**22.4**		µg/kg wet		20.0		112	70-130		
1,3,5-Trimethylbenzene	**22.1**		µg/kg wet		20.0		110	70-130		
Vinyl chloride	**19.8**		µg/kg wet		20.0		99	70-130		
m,p-Xylene	**43.2**		µg/kg wet		40.0		108	70-130		
o-Xylene	**22.2**		µg/kg wet		20.0		111	70-130		
Tetrahydrofuran	**19.9**		µg/kg wet		20.0		99	70-130		
Ethyl ether	**19.8**		µg/kg wet		20.0		99	70-130		
Tert-amyl methyl ether	**20.1**		µg/kg wet		20.0		100	70-130		
Ethyl tert-butyl ether	**19.4**		µg/kg wet		20.0		97	70-130		
Di-isopropyl ether	**19.7**		µg/kg wet		20.0		98	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121017 - SW846 5030 Soil (high level)										
LCS (1121017-BS1)					Prepared & Analyzed: 12-Oct-11					
Tert-Butanol / butyl alcohol	**215**		µg/kg wet		200		107	70-130		
1,4-Dioxane	**179**		µg/kg wet		200		90	70-130		
trans-1,4-Dichloro-2-butene	**23.9**		µg/kg wet		20.0		120	70-130		
Ethanol	**459**		µg/kg wet		400		115	70-130		
Surrogate: 4-Bromofluorobenzene	*29.6*		µg/kg wet		*30.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*28.7*		µg/kg wet		*30.0*		*96*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*30.7*		µg/kg wet		*30.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*32.0*		µg/kg wet		*30.0*		*107*	*70-130*		
LCS Dup (1121017-BSD1)					Prepared & Analyzed: 12-Oct-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**21.0**		µg/kg wet		20.0		105	70-130	7	25
Acetone	**22.2**		µg/kg wet		20.0		111	70-130	5	50
Acrylonitrile	**21.6**		µg/kg wet		20.0		108	70-130	0.5	25
Benzene	**21.2**		µg/kg wet		20.0		106	70-130	8	25
Bromobenzene	**21.9**		µg/kg wet		20.0		110	70-130	9	25
Bromochloromethane	**21.0**		µg/kg wet		20.0		105	70-130	8	25
Bromodichloromethane	**24.4**		µg/kg wet		20.0		122	70-130	8	25
Bromoform	**26.9**	QM9	µg/kg wet		20.0		135	70-130	5	25
Bromomethane	**21.8**		µg/kg wet		20.0		109	70-130	4	50
2-Butanone (MEK)	**21.2**		µg/kg wet		20.0		106	70-130	2	50
n-Butylbenzene	**23.4**		µg/kg wet		20.0		117	70-130	8	25
sec-Butylbenzene	**23.9**		µg/kg wet		20.0		120	70-130	8	25
tert-Butylbenzene	**23.8**		µg/kg wet		20.0		119	70-130	10	25
Carbon disulfide	**25.8**		µg/kg wet		20.0		129	70-130	8	25
Carbon tetrachloride	**24.6**		µg/kg wet		20.0		123	70-130	8	25
Chlorobenzene	**21.5**		µg/kg wet		20.0		107	70-130	10	25
Chloroethane	**22.2**		µg/kg wet		20.0		111	70-130	6	50
Chloroform	**21.4**		µg/kg wet		20.0		107	70-130	4	25
Chloromethane	**24.8**		µg/kg wet		20.0		124	70-130	11	25
2-Chlorotoluene	**23.2**		µg/kg wet		20.0		116	70-130	3	25
4-Chlorotoluene	**23.5**		µg/kg wet		20.0		118	70-130	11	25
1,2-Dibromo-3-chloropropane	**26.4**	QM9	µg/kg wet		20.0		132	70-130	4	25
Dibromochloromethane	**25.1**		µg/kg wet		20.0		126	70-130	7	50
1,2-Dibromoethane (EDB)	**21.9**		µg/kg wet		20.0		109	70-130	6	25
Dibromomethane	**22.6**		µg/kg wet		20.0		113	70-130	5	25
1,2-Dichlorobenzene	**22.5**		µg/kg wet		20.0		112	70-130	7	25
1,3-Dichlorobenzene	**22.9**		µg/kg wet		20.0		114	70-130	9	25
1,4-Dichlorobenzene	**22.0**		µg/kg wet		20.0		110	70-130	10	25
Dichlorodifluoromethane (Freon12)	**23.5**		µg/kg wet		20.0		118	70-130	6	50
1,1-Dichloroethane	**20.9**		µg/kg wet		20.0		105	70-130	7	25
1,2-Dichloroethane	**21.5**		µg/kg wet		20.0		108	70-130	6	25
1,1-Dichloroethene	**21.5**		µg/kg wet		20.0		108	70-130	8	25
cis-1,2-Dichloroethene	**20.3**		µg/kg wet		20.0		101	70-130	8	25
trans-1,2-Dichloroethene	**21.2**		µg/kg wet		20.0		106	70-130	8	25
1,2-Dichloropropane	**22.6**		µg/kg wet		20.0		113	70-130	9	25
1,3-Dichloropropane	**21.1**		µg/kg wet		20.0		105	70-130	3	25
2,2-Dichloropropane	**25.8**		µg/kg wet		20.0		129	70-130	7	25
1,1-Dichloropropene	**20.7**		µg/kg wet		20.0		103	70-130	9	25
cis-1,3-Dichloropropene	**22.4**		µg/kg wet		20.0		112	70-130	8	25
trans-1,3-Dichloropropene	**24.1**		µg/kg wet		20.0		120	70-130	6	25
Ethylbenzene	**22.6**		µg/kg wet		20.0		113	70-130	11	25
Hexachlorobutadiene	**21.5**		µg/kg wet		20.0		107	70-130	4	50

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121017 - SW846 5030 Soil (high level)										
LCS Dup (1121017-BSD1)					Prepared & Analyzed: 12-Oct-11					
2-Hexanone (MBK)	**22.4**		µg/kg wet		20.0		112	70-130	8	25
Isopropylbenzene	**22.7**		µg/kg wet		20.0		113	70-130	11	25
4-Isopropyltoluene	**23.5**		µg/kg wet		20.0		118	70-130	10	25
Methyl tert-butyl ether	**20.5**		µg/kg wet		20.0		102	70-130	5	25
4-Methyl-2-pentanone (MIBK)	**18.1**		µg/kg wet		20.0		90	70-130	3	50
Methylene chloride	**19.4**		µg/kg wet		20.0		97	70-130	8	25
Naphthalene	**20.0**		µg/kg wet		20.0		100	70-130	3	25
n-Propylbenzene	**23.4**		µg/kg wet		20.0		117	70-130	11	25
Styrene	**21.0**		µg/kg wet		20.0		105	70-130	10	25
1,1,1,2-Tetrachloroethane	**24.2**		µg/kg wet		20.0		121	70-130	7	25
1,1,2,2-Tetrachloroethane	**24.3**		µg/kg wet		20.0		122	70-130	0.2	25
Tetrachloroethene	**19.8**		µg/kg wet		20.0		99	70-130	9	25
Toluene	**20.7**		µg/kg wet		20.0		104	70-130	10	25
1,2,3-Trichlorobenzene	**21.9**		µg/kg wet		20.0		110	70-130	3	25
1,2,4-Trichlorobenzene	**20.3**		µg/kg wet		20.0		102	70-130	4	25
1,3,5-Trichlorobenzene	**20.6**		µg/kg wet		20.0		103	70-130	8	25
1,1,1-Trichloroethane	**24.4**		µg/kg wet		20.0		122	70-130	8	25
1,1,2-Trichloroethane	**22.0**		µg/kg wet		20.0		110	70-130	6	25
Trichloroethene	**21.3**		µg/kg wet		20.0		107	70-130	9	25
Trichlorofluoromethane (Freon 11)	**22.7**		µg/kg wet		20.0		114	70-130	7	50
1,2,3-Trichloropropane	**22.6**		µg/kg wet		20.0		113	70-130	4	25
1,2,4-Trimethylbenzene	**24.4**		µg/kg wet		20.0		122	70-130	9	25
1,3,5-Trimethylbenzene	**24.7**		µg/kg wet		20.0		123	70-130	11	25
Vinyl chloride	**21.5**		µg/kg wet		20.0		108	70-130	9	25
m,p-Xylene	**47.4**		µg/kg wet		40.0		118	70-130	9	25
o-Xylene	**24.5**		µg/kg wet		20.0		123	70-130	10	25
Tetrahydrofuran	**20.7**		µg/kg wet		20.0		104	70-130	4	25
Ethyl ether	**20.8**		µg/kg wet		20.0		104	70-130	5	50
Tert-amyl methyl ether	**21.4**		µg/kg wet		20.0		107	70-130	6	25
Ethyl tert-butyl ether	**21.2**		µg/kg wet		20.0		106	70-130	9	25
Di-isopropyl ether	**20.8**		µg/kg wet		20.0		104	70-130	6	25
Tert-Butanol / butyl alcohol	**228**		µg/kg wet		200		114	70-130	6	25
1,4-Dioxane	**178**		µg/kg wet		200		89	70-130	1	25
trans-1,4-Dichloro-2-butene	**25.2**		µg/kg wet		20.0		126	70-130	5	25
Ethanol	**484**		µg/kg wet		400		121	70-130	5	30
Surrogate: 4-Bromofluorobenzene	*29.9*		µg/kg wet		*30.0*		*100*	*70-130*		
Surrogate: Toluene-d8	*29.0*		µg/kg wet		*30.0*		*97*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*30.6*		µg/kg wet		*30.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*31.7*		µg/kg wet		*30.0*		*106*	*70-130*		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1120918 - General Preparation										
Duplicate (1120918-DUP1)			**Source: SB36871-01**			Prepared & Analyzed: 11-Oct-11				
% Solids	**75.9**		%			77.6			2	20

Notes and Definitions

QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
VOC8	Reporting limits reflect SW846 5030 extraction technique due to interference and/or QC issues using SW846 5035A extraction technique.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
June O'Connor
Nicole Leja

SB 36871 M

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- [x] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: ECS
10 State St
Woburn, MA 01801

Telephone #: 781 246 8897
Project Mgr. Kathy Baxter

Invoice To: ECS

P.O. No.: _____ RQN: 6003

Project No.: 05-216613
Site Name: Conway Park
Location: Somerville State: MA
Sampler(s): Kate Ziegler

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8=$NaHSO_4$ 9= Deionized Water 10= _____ 11= _____

List preservative code below: 3, 9, F

QA/QC Reporting Notes:
* additional charges may apply

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Containers:	Analyses: VOCs 8260B							
36871.01	F-3-S (8')	9/28/11	1430	G	SO	3	1				X							

MA DEP MCP CAM Report: Yes ☐ No ☐
CT DPH RCP Report: Yes ☐ No ☐

QA/QC Reporting Level
☐ Standard ☐ No QC ☐ DQA*
☐ NY ASP A* ☐ NY ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ TIER II* ☐ TIER V*
☐ Other _____

State-specific reporting standards:

- 1 MeOH voas
- 2 Frozen DI voas
- 1 unpr. 8oz amberglass jar

(frozen voas are in freezer in tinfoil)

Relinquished by:	Received by:	Date:	Time:	Temp°C
10/3/11 1200		10/4/11	1240	4.1
		10/4/11	1728	2.7

☐ EDD Format _____
☒ E-mail to kbaxter@ecsconsult.com

☐ Ambient ☐ Iced ☑ Refrigerated ☐ Fridge temp ____ °C ☐ Freezer temp ____ °C

Report Date:
20-Oct-11 12:19

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Environmental Compliance Services
10 State Street
Woburn, MA 01801
Attn: Kathy Baxter

Project: Conway Park - Somerville, MA
Project #: 05-216613

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SB37133-01	F-S-5(8')	Soil	05-Oct-11 12:00	06-Oct-11 18:20

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.
Please note that this report contains 11 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.	**Project #:** 05-216613
Project Location: Conway Park - Somerville, MA	**RTN:**
This form provides certifications for the following data set: SB37133-01	
Matrices: Soil	

CAM Protocol

✓ 8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	✓ Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?	✓ Yes No

Responses to questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes ✓ No

<u>Data User Note:</u> Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	✓ Yes No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	✓ Yes No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Nicole Leja
Laboratory Director
Date: 10/20/2011

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 2.2 degrees Celsius. The condition of these samples was further noted as refrigerated. The samples were transported on ice to the laboratory facility and the temperature was recorded at 0.4 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Additional dilution factors may be required to keep analyte concentration within instrument calibration.

Method SW846 5035A is designed to use on samples containing low levels of VOCs, ranging from 0.5 to 200 ug/Kg. Target analytes that are less responsive to purge and trap may be present at concentrations over 200ug/Kg but may not be reportable in the methanol preserved vial (SW846 5030). This is the result of the inherent dilution factor required for the methanol preservation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260C

Calibration:

1110016

Analyte quantified by quadratic equation type calibration.

2-Butanone (MEK)
Acetone

This affected the following samples:

1121001-BLK1
1121001-BS1
1121001-BSD1
F-S-5(8')
S109106-ICV1
S109373-CCV1

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-S-5(8') SB37133-01	05-216613	Soil	05-Oct-11 12:00	06-Oct-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
	VOC Extraction	Field extracted		N/A			1	VOC Soil Extraction	11-Oct-11	11-Oct-11	BD	1120969	
Volatile Organic Compounds Prepared by method SW846 5035A Soil (low level)						Initial weight: 5.87 g							
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.6		µg/kg dry	5.6	3.7	1	SW846 8260C	12-Oct-11	14-Oct-11	JRO	1121001	
67-64-1	Acetone	< 56.1		µg/kg dry	56.1	42.1	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 5.6		µg/kg dry	5.6	5.0	1	"	"	"	"	"	
71-43-2	Benzene	< 5.6		µg/kg dry	5.6	2.9	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 5.6		µg/kg dry	5.6	3.6	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 5.6		µg/kg dry	5.6	1.8	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 5.6		µg/kg dry	5.6	2.1	1	"	"	"	"	"	
75-25-2	Bromoform	< 5.6		µg/kg dry	5.6	3.9	1	"	"	"	"	"	
74-83-9	Bromomethane	< 11.2		µg/kg dry	11.2	10.1	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 56.1		µg/kg dry	56.1	48.1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5.6		µg/kg dry	5.6	2.8	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5.6		µg/kg dry	5.6	5.4	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5.6		µg/kg dry	5.6	4.1	1	"	"	"	"	"	
75-15-0	Carbon disulfide	< 11.2		µg/kg dry	11.2	8.0	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 5.6		µg/kg dry	5.6	5.6	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 5.6		µg/kg dry	5.6	3.1	1	"	"	"	"	"	
75-00-3	Chloroethane	< 11.2		µg/kg dry	11.2	7.9	1	"	"	"	"	"	
67-66-3	Chloroform	< 5.6		µg/kg dry	5.6	2.7	1	"	"	"	"	"	
74-87-3	Chloromethane	< 11.2		µg/kg dry	11.2	2.8	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5.6		µg/kg dry	5.6	3.4	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5.6		µg/kg dry	5.6	5.0	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 11.2		µg/kg dry	11.2	10.6	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 5.6		µg/kg dry	5.6	2.7	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 5.6		µg/kg dry	5.6	3.5	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 5.6		µg/kg dry	5.6	5.6	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5.6		µg/kg dry	5.6	4.5	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5.6		µg/kg dry	5.6	5.6	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5.6		µg/kg dry	5.6	3.8	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 11.2		µg/kg dry	11.2	9.5	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 5.6		µg/kg dry	5.6	5.1	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 5.6		µg/kg dry	5.6	3.1	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 5.6		µg/kg dry	5.6	2.8	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 5.6		µg/kg dry	5.6	2.4	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 5.6		µg/kg dry	5.6	4.7	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 5.6		µg/kg dry	5.6	2.9	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 5.6		µg/kg dry	5.6	2.8	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 5.6		µg/kg dry	5.6	2.3	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5.6		µg/kg dry	5.6	3.5	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 5.6		µg/kg dry	5.6	3.1	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 5.6		µg/kg dry	5.6	1.6	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 5.6		µg/kg dry	5.6	3.4	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5.6		µg/kg dry	5.6	4.8	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-S-5(8') SB37133-01	05-216613	Soil	05-Oct-11 12:00	06-Oct-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds													
Prepared by method SW846 5035A Soil (low level)							Initial weight: 5.87 g						
591-78-6	2-Hexanone (MBK)	< 56.1		µg/kg dry	56.1	14.3	1	SW846 8260C	12-Oct-11	14-Oct-11	JRO	1121001	
98-82-8	Isopropylbenzene	< 5.6		µg/kg dry	5.6	2.8	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 5.6		µg/kg dry	5.6	2.3	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	< 5.6		µg/kg dry	5.6	4.1	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 56.1		µg/kg dry	56.1	18.2	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 11.2		µg/kg dry	11.2	2.8	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.6		µg/kg dry	5.6	3.5	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5.6		µg/kg dry	5.6	3.4	1	"	"	"	"	"	
100-42-5	Styrene	< 5.6		µg/kg dry	5.6	4.1	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	< 5.6		µg/kg dry	5.6	5.4	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 5.6		µg/kg dry	5.6	4.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 5.6		µg/kg dry	5.6	3.2	1	"	"	"	"	"	
108-88-3	Toluene	< 5.6		µg/kg dry	5.6	5.0	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5.6		µg/kg dry	5.6	4.9	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5.6		µg/kg dry	5.6	4.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5.6		µg/kg dry	5.6	4.0	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 5.6		µg/kg dry	5.6	4.5	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 5.6		µg/kg dry	5.6	4.8	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 5.6		µg/kg dry	5.6	4.3	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	< 5.6		µg/kg dry	5.6	2.3	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5.6		µg/kg dry	5.6	2.5	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5.6		µg/kg dry	5.6	1.8	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5.6		µg/kg dry	5.6	5.6	1	"	"	"	"	"	
75-01-4	Vinyl chloride	< 5.6		µg/kg dry	5.6	5.3	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 11.2		µg/kg dry	11.2	10.9	1	"	"	"	"	"	
95-47-6	o-Xylene	< 5.6		µg/kg dry	5.6	3.8	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 11.2		µg/kg dry	11.2	10.4	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5.6		µg/kg dry	5.6	5.2	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	< 5.6		µg/kg dry	5.6	4.4	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 5.6		µg/kg dry	5.6	2.0	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 5.6		µg/kg dry	5.6	1.8	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 56.1		µg/kg dry	56.1	31.7	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 112		µg/kg dry	112	91.8	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-butene	< 28.0		µg/kg dry	28.0	14.4	1	"	"	"	"	"	
64-17-5	Ethanol	< 2240		µg/kg dry	2240	469	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*101*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*106*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*98*			*70-130 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**87.3**		%			1	SM2540 G Mod.	14-Oct-11	14-Oct-11	DT	1121276	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121001 - SW846 5035A Soil (low level)										
Blank (1121001-BLK1)					Prepared: 12-Oct-11 Analyzed: 13-Oct-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.0		µg/kg wet	5.0						
Acetone	< 50.0		µg/kg wet	50.0						
Acrylonitrile	< 5.0		µg/kg wet	5.0						
Benzene	< 5.0		µg/kg wet	5.0						
Bromobenzene	< 5.0		µg/kg wet	5.0						
Bromochloromethane	< 5.0		µg/kg wet	5.0						
Bromodichloromethane	< 5.0		µg/kg wet	5.0						
Bromoform	< 5.0		µg/kg wet	5.0						
Bromomethane	< 10.0		µg/kg wet	10.0						
2-Butanone (MEK)	< 50.0		µg/kg wet	50.0						
n-Butylbenzene	< 5.0		µg/kg wet	5.0						
sec-Butylbenzene	< 5.0		µg/kg wet	5.0						
tert-Butylbenzene	< 5.0		µg/kg wet	5.0						
Carbon disulfide	< 10.0		µg/kg wet	10.0						
Carbon tetrachloride	< 5.0		µg/kg wet	5.0						
Chlorobenzene	< 5.0		µg/kg wet	5.0						
Chloroethane	< 10.0		µg/kg wet	10.0						
Chloroform	< 5.0		µg/kg wet	5.0						
Chloromethane	< 10.0		µg/kg wet	10.0						
2-Chlorotoluene	< 5.0		µg/kg wet	5.0						
4-Chlorotoluene	< 5.0		µg/kg wet	5.0						
1,2-Dibromo-3-chloropropane	< 10.0		µg/kg wet	10.0						
Dibromochloromethane	< 5.0		µg/kg wet	5.0						
1,2-Dibromoethane (EDB)	< 5.0		µg/kg wet	5.0						
Dibromomethane	< 5.0		µg/kg wet	5.0						
1,2-Dichlorobenzene	< 5.0		µg/kg wet	5.0						
1,3-Dichlorobenzene	< 5.0		µg/kg wet	5.0						
1,4-Dichlorobenzene	< 5.0		µg/kg wet	5.0						
Dichlorodifluoromethane (Freon12)	< 10.0		µg/kg wet	10.0						
1,1-Dichloroethane	< 5.0		µg/kg wet	5.0						
1,2-Dichloroethane	< 5.0		µg/kg wet	5.0						
1,1-Dichloroethene	< 5.0		µg/kg wet	5.0						
cis-1,2-Dichloroethene	< 5.0		µg/kg wet	5.0						
trans-1,2-Dichloroethene	< 5.0		µg/kg wet	5.0						
1,2-Dichloropropane	< 5.0		µg/kg wet	5.0						
1,3-Dichloropropane	< 5.0		µg/kg wet	5.0						
2,2-Dichloropropane	< 5.0		µg/kg wet	5.0						
1,1-Dichloropropene	< 5.0		µg/kg wet	5.0						
cis-1,3-Dichloropropene	< 5.0		µg/kg wet	5.0						
trans-1,3-Dichloropropene	< 5.0		µg/kg wet	5.0						
Ethylbenzene	< 5.0		µg/kg wet	5.0						
Hexachlorobutadiene	< 5.0		µg/kg wet	5.0						
2-Hexanone (MBK)	< 50.0		µg/kg wet	50.0						
Isopropylbenzene	< 5.0		µg/kg wet	5.0						
4-Isopropyltoluene	< 5.0		µg/kg wet	5.0						
Methyl tert-butyl ether	< 5.0		µg/kg wet	5.0						
4-Methyl-2-pentanone (MIBK)	< 50.0		µg/kg wet	50.0						
Methylene chloride	< 10.0		µg/kg wet	10.0						
Naphthalene	< 5.0		µg/kg wet	5.0						
n-Propylbenzene	< 5.0		µg/kg wet	5.0						
Styrene	< 5.0		µg/kg wet	5.0						
1,1,1,2-Tetrachloroethane	< 5.0		µg/kg wet	5.0						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121001 - SW846 5035A Soil (low level)										
Blank (1121001-BLK1)					Prepared: 12-Oct-11 Analyzed: 13-Oct-11					
1,1,2,2-Tetrachloroethane	< 5.0		µg/kg wet	5.0						
Tetrachloroethene	< 5.0		µg/kg wet	5.0						
Toluene	< 5.0		µg/kg wet	5.0						
1,2,3-Trichlorobenzene	< 5.0		µg/kg wet	5.0						
1,2,4-Trichlorobenzene	< 5.0		µg/kg wet	5.0						
1,3,5-Trichlorobenzene	< 5.0		µg/kg wet	5.0						
1,1,1-Trichloroethane	< 5.0		µg/kg wet	5.0						
1,1,2-Trichloroethane	< 5.0		µg/kg wet	5.0						
Trichloroethene	< 5.0		µg/kg wet	5.0						
Trichlorofluoromethane (Freon 11)	< 5.0		µg/kg wet	5.0						
1,2,3-Trichloropropane	< 5.0		µg/kg wet	5.0						
1,2,4-Trimethylbenzene	< 5.0		µg/kg wet	5.0						
1,3,5-Trimethylbenzene	< 5.0		µg/kg wet	5.0						
Vinyl chloride	< 5.0		µg/kg wet	5.0						
m,p-Xylene	< 10.0		µg/kg wet	10.0						
o-Xylene	< 5.0		µg/kg wet	5.0						
Tetrahydrofuran	< 10.0		µg/kg wet	10.0						
Ethyl ether	< 5.0		µg/kg wet	5.0						
Tert-amyl methyl ether	< 5.0		µg/kg wet	5.0						
Ethyl tert-butyl ether	< 5.0		µg/kg wet	5.0						
Di-isopropyl ether	< 5.0		µg/kg wet	5.0						
Tert-Butanol / butyl alcohol	< 50.0		µg/kg wet	50.0						
1,4-Dioxane	< 100		µg/kg wet	100						
trans-1,4-Dichloro-2-butene	< 25.0		µg/kg wet	25.0						
Ethanol	< 2000		µg/kg wet	2000						
Surrogate: 4-Bromofluorobenzene	*52.7*		µg/kg wet		*50.0*		*105*	*70-130*		
Surrogate: Toluene-d8	*50.6*		µg/kg wet		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.6*		µg/kg wet		*50.0*		*105*	*70-130*		
Surrogate: Dibromofluoromethane	*49.0*		µg/kg wet		*50.0*		*98*	*70-130*		
LCS (1121001-BS1)					Prepared: 12-Oct-11 Analyzed: 13-Oct-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**17.6**		µg/kg wet		20.0		88	70-130		
Acetone	**20.5**		µg/kg wet		20.0		103	70-130		
Acrylonitrile	**18.7**		µg/kg wet		20.0		93	70-130		
Benzene	**18.8**		µg/kg wet		20.0		94	70-130		
Bromobenzene	**18.7**		µg/kg wet		20.0		93	70-130		
Bromochloromethane	**19.1**		µg/kg wet		20.0		95	70-130		
Bromodichloromethane	**17.9**		µg/kg wet		20.0		89	70-130		
Bromoform	**15.0**		µg/kg wet		20.0		75	70-130		
Bromomethane	**18.3**		µg/kg wet		20.0		92	70-130		
2-Butanone (MEK)	**16.5**		µg/kg wet		20.0		83	70-130		
n-Butylbenzene	**19.8**		µg/kg wet		20.0		99	70-130		
sec-Butylbenzene	**18.7**		µg/kg wet		20.0		93	70-130		
tert-Butylbenzene	**18.3**		µg/kg wet		20.0		92	70-130		
Carbon disulfide	**15.8**		µg/kg wet		20.0		79	70-130		
Carbon tetrachloride	**16.3**		µg/kg wet		20.0		82	70-130		
Chlorobenzene	**18.6**		µg/kg wet		20.0		93	70-130		
Chloroethane	**18.1**		µg/kg wet		20.0		90	70-130		
Chloroform	**17.8**		µg/kg wet		20.0		89	70-130		
Chloromethane	**17.6**		µg/kg wet		20.0		88	70-130		
2-Chlorotoluene	**18.4**		µg/kg wet		20.0		92	70-130		
4-Chlorotoluene	**18.7**		µg/kg wet		20.0		93	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121001 - SW846 5035A Soil (low level)										
LCS (1121001-BS1)					Prepared: 12-Oct-11 Analyzed: 13-Oct-11					
1,2-Dibromo-3-chloropropane	**16.1**		µg/kg wet		20.0		80	70-130		
Dibromochloromethane	**17.2**		µg/kg wet		20.0		86	70-130		
1,2-Dibromoethane (EDB)	**20.2**		µg/kg wet		20.0		101	70-130		
Dibromomethane	**19.3**		µg/kg wet		20.0		97	70-130		
1,2-Dichlorobenzene	**18.6**		µg/kg wet		20.0		93	70-130		
1,3-Dichlorobenzene	**19.0**		µg/kg wet		20.0		95	70-130		
1,4-Dichlorobenzene	**18.3**		µg/kg wet		20.0		92	70-130		
Dichlorodifluoromethane (Freon12)	**15.6**		µg/kg wet		20.0		78	70-130		
1,1-Dichloroethane	**18.0**		µg/kg wet		20.0		90	70-130		
1,2-Dichloroethane	**18.0**		µg/kg wet		20.0		90	70-130		
1,1-Dichloroethene	**18.1**		µg/kg wet		20.0		90	70-130		
cis-1,2-Dichloroethene	**18.7**		µg/kg wet		20.0		94	70-130		
trans-1,2-Dichloroethene	**18.1**		µg/kg wet		20.0		91	70-130		
1,2-Dichloropropane	**18.4**		µg/kg wet		20.0		92	70-130		
1,3-Dichloropropane	**19.3**		µg/kg wet		20.0		96	70-130		
2,2-Dichloropropane	**15.5**		µg/kg wet		20.0		78	70-130		
1,1-Dichloropropene	**18.1**		µg/kg wet		20.0		90	70-130		
cis-1,3-Dichloropropene	**17.9**		µg/kg wet		20.0		90	70-130		
trans-1,3-Dichloropropene	**17.6**		µg/kg wet		20.0		88	70-130		
Ethylbenzene	**18.4**		µg/kg wet		20.0		92	70-130		
Hexachlorobutadiene	**17.2**		µg/kg wet		20.0		86	70-130		
2-Hexanone (MBK)	**18.5**		µg/kg wet		20.0		93	70-130		
Isopropylbenzene	**18.3**		µg/kg wet		20.0		91	70-130		
4-Isopropyltoluene	**18.3**		µg/kg wet		20.0		92	70-130		
Methyl tert-butyl ether	**18.1**		µg/kg wet		20.0		91	70-130		
4-Methyl-2-pentanone (MIBK)	**20.3**		µg/kg wet		20.0		102	70-130		
Methylene chloride	**19.1**		µg/kg wet		20.0		95	70-130		
Naphthalene	**19.7**		µg/kg wet		20.0		98	70-130		
n-Propylbenzene	**18.8**		µg/kg wet		20.0		94	70-130		
Styrene	**19.1**		µg/kg wet		20.0		95	70-130		
1,1,1,2-Tetrachloroethane	**17.3**		µg/kg wet		20.0		87	70-130		
1,1,2,2-Tetrachloroethane	**19.9**		µg/kg wet		20.0		99	70-130		
Tetrachloroethene	**18.3**		µg/kg wet		20.0		91	70-130		
Toluene	**18.8**		µg/kg wet		20.0		94	70-130		
1,2,3-Trichlorobenzene	**19.6**		µg/kg wet		20.0		98	70-130		
1,2,4-Trichlorobenzene	**18.9**		µg/kg wet		20.0		95	70-130		
1,3,5-Trichlorobenzene	**19.3**		µg/kg wet		20.0		96	70-130		
1,1,1-Trichloroethane	**16.8**		µg/kg wet		20.0		84	70-130		
1,1,2-Trichloroethane	**19.2**		µg/kg wet		20.0		96	70-130		
Trichloroethene	**18.6**		µg/kg wet		20.0		93	70-130		
Trichlorofluoromethane (Freon 11)	**16.9**		µg/kg wet		20.0		84	70-130		
1,2,3-Trichloropropane	**19.4**		µg/kg wet		20.0		97	70-130		
1,2,4-Trimethylbenzene	**18.6**		µg/kg wet		20.0		93	70-130		
1,3,5-Trimethylbenzene	**18.5**		µg/kg wet		20.0		92	70-130		
Vinyl chloride	**18.4**		µg/kg wet		20.0		92	70-130		
m,p-Xylene	**36.7**		µg/kg wet		40.0		92	70-130		
o-Xylene	**18.4**		µg/kg wet		20.0		92	70-130		
Tetrahydrofuran	**18.8**		µg/kg wet		20.0		94	70-130		
Ethyl ether	**19.1**		µg/kg wet		20.0		96	70-130		
Tert-amyl methyl ether	**18.3**		µg/kg wet		20.0		92	70-130		
Ethyl tert-butyl ether	**17.8**		µg/kg wet		20.0		89	70-130		
Di-isopropyl ether	**17.4**		µg/kg wet		20.0		87	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121001 - SW846 5035A Soil (low level)										
LCS (1121001-BS1)					Prepared: 12-Oct-11 Analyzed: 13-Oct-11					
Tert-Butanol / butyl alcohol	**185**		µg/kg wet		200		92	70-130		
1,4-Dioxane	**209**		µg/kg wet		200		104	70-130		
trans-1,4-Dichloro-2-butene	**15.1**		µg/kg wet		20.0		75	70-130		
Ethanol	**369**		µg/kg wet		400		92	70-130		
Surrogate: 4-Bromofluorobenzene	*52.0*		µg/kg wet		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*50.8*		µg/kg wet		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*47.4*		µg/kg wet		*50.0*		*95*	*70-130*		
Surrogate: Dibromofluoromethane	*50.2*		µg/kg wet		*50.0*		*100*	*70-130*		
LCS Dup (1121001-BSD1)					Prepared: 12-Oct-11 Analyzed: 13-Oct-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**17.7**		µg/kg wet		20.0		88	70-130	0.7	25
Acetone	**18.4**		µg/kg wet		20.0		92	70-130	11	50
Acrylonitrile	**18.0**		µg/kg wet		20.0		90	70-130	4	25
Benzene	**18.7**		µg/kg wet		20.0		94	70-130	0.4	25
Bromobenzene	**18.9**		µg/kg wet		20.0		95	70-130	1	25
Bromochloromethane	**19.2**		µg/kg wet		20.0		96	70-130	0.5	25
Bromodichloromethane	**18.1**		µg/kg wet		20.0		91	70-130	1	25
Bromoform	**14.5**		µg/kg wet		20.0		73	70-130	3	25
Bromomethane	**18.4**		µg/kg wet		20.0		92	70-130	0.4	50
2-Butanone (MEK)	**16.4**		µg/kg wet		20.0		82	70-130	1	50
n-Butylbenzene	**19.9**		µg/kg wet		20.0		99	70-130	0.5	25
sec-Butylbenzene	**18.9**		µg/kg wet		20.0		94	70-130	1	25
tert-Butylbenzene	**18.5**		µg/kg wet		20.0		92	70-130	0.9	25
Carbon disulfide	**16.2**		µg/kg wet		20.0		81	70-130	2	25
Carbon tetrachloride	**16.5**		µg/kg wet		20.0		83	70-130	1	25
Chlorobenzene	**18.6**		µg/kg wet		20.0		93	70-130	0.2	25
Chloroethane	**18.0**		µg/kg wet		20.0		90	70-130	0.5	50
Chloroform	**18.1**		µg/kg wet		20.0		90	70-130	1	25
Chloromethane	**17.6**		µg/kg wet		20.0		88	70-130	0.2	25
2-Chlorotoluene	**18.1**		µg/kg wet		20.0		91	70-130	1	25
4-Chlorotoluene	**18.8**		µg/kg wet		20.0		94	70-130	0.5	25
1,2-Dibromo-3-chloropropane	**14.8**		µg/kg wet		20.0		74	70-130	8	25
Dibromochloromethane	**16.9**		µg/kg wet		20.0		84	70-130	2	50
1,2-Dibromoethane (EDB)	**19.6**		µg/kg wet		20.0		98	70-130	3	25
Dibromomethane	**19.0**		µg/kg wet		20.0		95	70-130	2	25
1,2-Dichlorobenzene	**18.4**		µg/kg wet		20.0		92	70-130	0.6	25
1,3-Dichlorobenzene	**19.1**		µg/kg wet		20.0		96	70-130	0.4	25
1,4-Dichlorobenzene	**18.3**		µg/kg wet		20.0		92	70-130	0	25
Dichlorodifluoromethane (Freon12)	**15.5**		µg/kg wet		20.0		78	70-130	0.5	50
1,1-Dichloroethane	**18.2**		µg/kg wet		20.0		91	70-130	1	25
1,2-Dichloroethane	**17.7**		µg/kg wet		20.0		89	70-130	2	25
1,1-Dichloroethene	**18.1**		µg/kg wet		20.0		90	70-130	0.2	25
cis-1,2-Dichloroethene	**18.8**		µg/kg wet		20.0		94	70-130	0.4	25
trans-1,2-Dichloroethene	**18.7**		µg/kg wet		20.0		93	70-130	3	25
1,2-Dichloropropane	**18.6**		µg/kg wet		20.0		93	70-130	0.9	25
1,3-Dichloropropane	**19.0**		µg/kg wet		20.0		95	70-130	2	25
2,2-Dichloropropane	**15.6**		µg/kg wet		20.0		78	70-130	0.8	25
1,1-Dichloropropene	**18.2**		µg/kg wet		20.0		91	70-130	0.9	25
cis-1,3-Dichloropropene	**17.8**		µg/kg wet		20.0		89	70-130	0.4	25
trans-1,3-Dichloropropene	**17.2**		µg/kg wet		20.0		86	70-130	2	25
Ethylbenzene	**18.4**		µg/kg wet		20.0		92	70-130	0.5	25
Hexachlorobutadiene	**17.4**		µg/kg wet		20.0		87	70-130	2	50

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121001 - SW846 5035A Soil (low level)										
LCS Dup (1121001-BSD1)					Prepared: 12-Oct-11 Analyzed: 13-Oct-11					
2-Hexanone (MBK)	**17.2**		µg/kg wet		20.0		86	70-130	7	25
Isopropylbenzene	**18.4**		µg/kg wet		20.0		92	70-130	0.7	25
4-Isopropyltoluene	**18.6**		µg/kg wet		20.0		93	70-130	1	25
Methyl tert-butyl ether	**17.8**		µg/kg wet		20.0		89	70-130	2	25
4-Methyl-2-pentanone (MIBK)	**19.2**		µg/kg wet		20.0		96	70-130	6	50
Methylene chloride	**18.8**		µg/kg wet		20.0		94	70-130	2	25
Naphthalene	**19.3**		µg/kg wet		20.0		96	70-130	2	25
n-Propylbenzene	**19.0**		µg/kg wet		20.0		95	70-130	1	25
Styrene	**19.1**		µg/kg wet		20.0		96	70-130	0.2	25
1,1,1,2-Tetrachloroethane	**17.2**		µg/kg wet		20.0		86	70-130	0.7	25
1,1,2,2-Tetrachloroethane	**19.3**		µg/kg wet		20.0		97	70-130	3	25
Tetrachloroethene	**18.8**		µg/kg wet		20.0		94	70-130	2	25
Toluene	**18.8**		µg/kg wet		20.0		94	70-130	0.3	25
1,2,3-Trichlorobenzene	**19.6**		µg/kg wet		20.0		98	70-130	0.3	25
1,2,4-Trichlorobenzene	**19.1**		µg/kg wet		20.0		95	70-130	0.9	25
1,3,5-Trichlorobenzene	**19.5**		µg/kg wet		20.0		97	70-130	0.9	25
1,1,1-Trichloroethane	**16.9**		µg/kg wet		20.0		84	70-130	0.4	25
1,1,2-Trichloroethane	**19.0**		µg/kg wet		20.0		95	70-130	0.9	25
Trichloroethene	**18.6**		µg/kg wet		20.0		93	70-130	0.05	25
Trichlorofluoromethane (Freon 11)	**17.0**		µg/kg wet		20.0		85	70-130	0.7	50
1,2,3-Trichloropropane	**19.0**		µg/kg wet		20.0		95	70-130	2	25
1,2,4-Trimethylbenzene	**18.7**		µg/kg wet		20.0		94	70-130	0.3	25
1,3,5-Trimethylbenzene	**18.7**		µg/kg wet		20.0		93	70-130	1	25
Vinyl chloride	**18.4**		µg/kg wet		20.0		92	70-130	0.3	25
m,p-Xylene	**37.2**		µg/kg wet		40.0		93	70-130	1	25
o-Xylene	**18.6**		µg/kg wet		20.0		93	70-130	0.8	25
Tetrahydrofuran	**17.6**		µg/kg wet		20.0		88	70-130	6	25
Ethyl ether	**18.8**		µg/kg wet		20.0		94	70-130	2	50
Tert-amyl methyl ether	**18.0**		µg/kg wet		20.0		90	70-130	2	25
Ethyl tert-butyl ether	**17.5**		µg/kg wet		20.0		88	70-130	1	25
Di-isopropyl ether	**17.3**		µg/kg wet		20.0		87	70-130	0.3	25
Tert-Butanol / butyl alcohol	**173**		µg/kg wet		200		87	70-130	6	25
1,4-Dioxane	**208**		µg/kg wet		200		104	70-130	0.6	25
trans-1,4-Dichloro-2-butene	**14.4**		µg/kg wet		20.0		72	70-130	4	25
Ethanol	**342**		µg/kg wet		400		86	70-130	8	30
Surrogate: 4-Bromofluorobenzene	*51.4*		µg/kg wet		*50.0*		*103*	*70-130*		
Surrogate: Toluene-d8	*50.2*		µg/kg wet		*50.0*		*100*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*46.3*		µg/kg wet		*50.0*		*93*	*70-130*		
Surrogate: Dibromofluoromethane	*49.6*		µg/kg wet		*50.0*		*99*	*70-130*		

Notes and Definitions

dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Kimberly Wisk

SB 37133M

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: ecs
10 state st
woburn ma 01801

Telephone #: 781 246 8897
Project Mgr. Kathy Baxter

Invoice To: ecs

P.O. No.: _____ RQN: 0003

Project No.: 05-216613
Site Name: Conway park
Location: Somerville State: ma
Sampler(s): Kate Ziegler

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8=$NaHSO_4$ 9=Deionized Water 10=_____ 11=_____

List preservative code below: 9, 7

QA/QC Reporting Notes:
* additional charges may apply

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: VOCs 8260							State-specific reporting standards:
37133.01	F-5-5 (8')	10/5/11	1200	G	SO	3	1			X							1 amber jar 1 meoH vial 2 DiH2O vials 6 DiH2O vials are in the freezer *

Relinquished by:	Received by:	Date:	Time:	Temp°C
[signature] 10/5/11 1600	[signature]	10/6/11	1252	2.2
[signature]	[signature]	10/6/11	18:20	9.0.4

☐ EDD Format _____
☐ E-mail to kbaxter@ecsconsult.com

☐ Ambient ☐ Iced ☒ Refrigerated ☐ Fridge temp ___ °C ☐ Freezer temp ___ °C

Report Date:
20-Oct-11 16:30

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Environmental Compliance Services
10 State Street
Woburn, MA 01801
Attn: Kathy Baxter

Project: Conway Park - Somerville, MA
Project #: 05-216613

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SB37225-01	F-N-6 (8')	Soil	06-Oct-11 00:00	07-Oct-11 17:30
SB37225-02	F-S-6 (4')	Soil	06-Oct-11 00:00	07-Oct-11 17:30
SB37225-03	F-S-6 (8')	Soil	06-Oct-11 00:00	07-Oct-11 17:30

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.
Please note that this report contains 23 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrices	Soil
Containers	✓ Satisfactory
Aqueous Preservative	✓ N/A pH≤2 pH>2 pH adjusted to <2 in lab
Temperature	Received on ice ✓ Received at 4 ± 2 ºC

Were all QA/QC procedures followed as required by the EPH method? *Yes*
Were any significant modifications made to the EPH method as specified in Section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:

Nicole Leja
Laboratory Director

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.	**Project #:** 05-216613
Project Location: Conway Park - Somerville, MA	**RTN:**
This form provides certifications for the following data set:	SB37225-01 through SB37225-03
Matrices: Soil	

CAM Protocol

✓ 8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	✓ MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	✓ Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	✓ Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?	✓ Yes No

Responses to questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes ✓ No

<u>Data User Note:</u> Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	✓ Yes No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Nicole Leja
Laboratory Director
Date: 10/20/2011

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 6.0 degrees Celsius. The condition of these samples was further noted as refrigerated. The samples were transported on ice to the laboratory facility and the temperature was recorded at 2.3 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Additional dilution factors may be required to keep analyte concentration within instrument calibration.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

MADEP EPH 5/2004 R

Laboratory Control Samples:

1121369 BSD

2-Methylnaphthalene RPD 41% (25%) is outside individual acceptance criteria, but within overall method allowances.

Acenaphthene RPD 31% (25%) is outside individual acceptance criteria, but within overall method allowances.

Acenaphthylene RPD 38% (25%) is outside individual acceptance criteria, but within overall method allowances.

Anthracene RPD 28% (25%) is outside individual acceptance criteria, but within overall method allowances.

Benzo (a) anthracene RPD 35% (25%) is outside individual acceptance criteria, but within overall method allowances.

Benzo (a) pyrene RPD 34% (25%) is outside individual acceptance criteria, but within overall method allowances.

Benzo (b) fluoranthene RPD 42% (25%) is outside individual acceptance criteria, but within overall method allowances.

Benzo (g,h,i) perylene RPD 35% (25%) is outside individual acceptance criteria, but within overall method allowances.

Benzo (k) fluoranthene RPD 27% (25%) is outside individual acceptance criteria, but within overall method allowances.

Chrysene RPD 34% (25%) is outside individual acceptance criteria, but within overall method allowances.

MADEP EPH 5/2004 R

Laboratory Control Samples:

1121369 BSD

Dibenzo (a,h) anthracene RPD 37% (25%) is outside individual acceptance criteria, but within overall method allowances.

Fluoranthene RPD 30% (25%) is outside individual acceptance criteria, but within overall method allowances.

Fluorene RPD 35% (25%) is outside individual acceptance criteria, but within overall method allowances.

Indeno (1,2,3-cd) pyrene RPD 41% (25%) is outside individual acceptance criteria, but within overall method allowances.

Naphthalene RPD 42% (25%) is outside individual acceptance criteria, but within overall method allowances.

Phenanthrene RPD 31% (25%) is outside individual acceptance criteria, but within overall method allowances.

Pyrene RPD 27% (25%) is outside individual acceptance criteria, but within overall method allowances.

1121369-BSD1

The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Anthracene
Benzo (a) anthracene
Benzo (a) pyrene
Benzo (b) fluoranthene
Benzo (g,h,i) perylene
Benzo (k) fluoranthene
Chrysene
Dibenzo (a,h) anthracene
Fluoranthene
Fluorene
Indeno (1,2,3-cd) pyrene
Naphthalene
Phenanthrene
Pyrene

SW846 8260C

Calibration:

1109007

Analyte quantified by quadratic equation type calibration.

1,2-Dibromo-3-chloropropane
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Bromoform
cis-1,3-Dichloropropene
Dibromochloromethane
trans-1,3-Dichloropropene

This affected the following samples:

S108096-ICV1

SW846 8260C

Samples:

S109343-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

Methylene chloride (-20.6%)

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

1,2-Dibromo-3-chloropropane (26.1%)
Bromoform (27.6%)

This affected the following samples:

1121119-BLK1
1121119-BS1
1121119-BSD1
F-S-6 (8')

SB37225-03 *F-S-6 (8')*

Elevated Reporting Limits due to the presence of high levels of non-target analytes.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-N-6 (8') SB37225-01	05-216613	Soil	06-Oct-11 00:00	07-Oct-11

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
	VOC Extraction	**Field extracted**		N/A			1	VOC Soil Extraction	12-Oct-11	12-Oct-11	BD	1121081	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-S-6 (4') SB37225-02	05-216613	Soil	06-Oct-11 00:00	07-Oct-11

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
	VOC Extraction	**Field extracted**		N/A			1	VOC Soil Extraction	12-Oct-11	12-Oct-11	BD	1121081	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-S-6 (8') SB37225-03	05-216613	Soil	06-Oct-11 00:00	07-Oct-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
	VOC Extraction	**Field extracted**		N/A			1	VOC Soil Extraction	12-Oct-11	12-Oct-11	BD	1121081	
Volatile Organic Compounds Prepared by method SW846 5030 Soil (high level)			R05				Initial weight: 15.41 g						
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 336		µg/kg dry	336	224	250	SW846 8260C	13-Oct-11	13-Oct-11	naa	1121119	
67-64-1	Acetone	< 3360		µg/kg dry	3360	2520	250	"	"	"	"	"	
107-13-1	Acrylonitrile	< 336		µg/kg dry	336	301	250	"	"	"	"	"	
71-43-2	Benzene	< 336		µg/kg dry	336	176	250	"	"	"	"	"	
108-86-1	Bromobenzene	< 336		µg/kg dry	336	214	250	"	"	"	"	"	
74-97-5	Bromochloromethane	< 336		µg/kg dry	336	110	250	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 336		µg/kg dry	336	127	250	"	"	"	"	"	
75-25-2	Bromoform	< 336		µg/kg dry	336	232	250	"	"	"	"	"	
74-83-9	Bromomethane	< 672		µg/kg dry	672	605	250	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 3360		µg/kg dry	3360	2880	250	"	"	"	"	"	
104-51-8	n-Butylbenzene	**7,380**		µg/kg dry	336	168	250	"	"	"	"	"	
135-98-8	sec-Butylbenzene	**7,020**		µg/kg dry	336	326	250	"	"	"	"	"	
98-06-6	tert-Butylbenzene	**477**		µg/kg dry	336	243	250	"	"	"	"	"	
75-15-0	Carbon disulfide	< 672		µg/kg dry	672	480	250	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 336		µg/kg dry	336	334	250	"	"	"	"	"	
108-90-7	Chlorobenzene	< 336		µg/kg dry	336	188	250	"	"	"	"	"	
75-00-3	Chloroethane	< 672		µg/kg dry	672	476	250	"	"	"	"	"	
67-66-3	Chloroform	< 336		µg/kg dry	336	164	250	"	"	"	"	"	
74-87-3	Chloromethane	< 672		µg/kg dry	672	169	250	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 336		µg/kg dry	336	205	250	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 336		µg/kg dry	336	301	250	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 672		µg/kg dry	672	635	250	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 336		µg/kg dry	336	161	250	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 336		µg/kg dry	336	208	250	"	"	"	"	"	
74-95-3	Dibromomethane	< 336		µg/kg dry	336	335	250	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 336		µg/kg dry	336	270	250	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 336		µg/kg dry	336	334	250	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 336		µg/kg dry	336	227	250	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 672		µg/kg dry	672	567	250	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 336		µg/kg dry	336	307	250	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 336		µg/kg dry	336	188	250	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 336		µg/kg dry	336	167	250	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 336		µg/kg dry	336	141	250	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 336		µg/kg dry	336	279	250	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 336		µg/kg dry	336	171	250	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 336		µg/kg dry	336	169	250	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 336		µg/kg dry	336	135	250	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 336		µg/kg dry	336	207	250	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 336		µg/kg dry	336	183	250	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 336		µg/kg dry	336	94.7	250	"	"	"	"	"	
100-41-4	Ethylbenzene	< 336		µg/kg dry	336	205	250	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-S-6 (8')	05-216613	Soil	06-Oct-11 00:00	07-Oct-11
SB37225-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds			R05										
Prepared by method SW846 5030 Soil (high level)							Initial weight: 15.41 g						
87-68-3	Hexachlorobutadiene	< 336		µg/kg dry	336	290	250	SW846 8260C	13-Oct-11	13-Oct-11	naa	1121119	
591-78-6	2-Hexanone (MBK)	< 3360		µg/kg dry	3360	857	250	"	"	"	"	"	
98-82-8	Isopropylbenzene	**2,110**		µg/kg dry	336	169	250	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 336		µg/kg dry	336	139	250	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	< 336		µg/kg dry	336	244	250	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 3360		µg/kg dry	3360	1090	250	"	"	"	"	"	
75-09-2	Methylene chloride	< 672		µg/kg dry	672	171	250	"	"	"	"	"	
91-20-3	Naphthalene	< 336		µg/kg dry	336	209	250	"	"	"	"	"	
103-65-1	n-Propylbenzene	**4,950**		µg/kg dry	336	202	250	"	"	"	"	"	
100-42-5	Styrene	< 336		µg/kg dry	336	249	250	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	< 336		µg/kg dry	336	323	250	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 336		µg/kg dry	336	255	250	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 336		µg/kg dry	336	192	250	"	"	"	"	"	
108-88-3	Toluene	< 336		µg/kg dry	336	301	250	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 336		µg/kg dry	336	291	250	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 336		µg/kg dry	336	253	250	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 336		µg/kg dry	336	238	250	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 336		µg/kg dry	336	269	250	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 336		µg/kg dry	336	289	250	"	"	"	"	"	
79-01-6	Trichloroethene	< 336		µg/kg dry	336	257	250	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	< 336		µg/kg dry	336	136	250	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 336		µg/kg dry	336	152	250	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 336		µg/kg dry	336	110	250	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 336		µg/kg dry	336	333	250	"	"	"	"	"	
75-01-4	Vinyl chloride	< 336		µg/kg dry	336	315	250	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 672		µg/kg dry	672	651	250	"	"	"	"	"	
95-47-6	o-Xylene	< 336		µg/kg dry	336	229	250	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 672		µg/kg dry	672	622	250	"	"	"	"	"	
60-29-7	Ethyl ether	< 336		µg/kg dry	336	313	250	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	< 336		µg/kg dry	336	265	250	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 336		µg/kg dry	336	117	250	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 336		µg/kg dry	336	108	250	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 3360		µg/kg dry	3360	1900	250	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 6720		µg/kg dry	6720	5500	250	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-butene	< 1680		µg/kg dry	1680	860	250	"	"	"	"	"	
64-17-5	Ethanol	< 134000		µg/kg dry	134000	28100	250	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*106*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*98*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*94*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*91*			*70-130 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-S-6 (8')	05-216613	Soil	06-Oct-11 00:00	07-Oct-11
SB37225-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons													
EPH Aliphatic/Aromatic Ranges Prepared by method SW846 3545A													
	C9-C18 Aliphatic Hydrocarbons	**4,380**		mg/kg dry	11.4	1.68	1	MADEP EPH 5/2004 R	17-Oct-11	19-Oct-11	MP	1121369	
	C19-C36 Aliphatic Hydrocarbons	**585**		mg/kg dry	11.4	5.58	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	**1,330**		mg/kg dry	11.4	4.13	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	**1,360**		mg/kg dry	11.4	4.13	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	**6,290**		mg/kg dry	11.4	11.4	1	"	"	"	"	"	
	Unadjusted Total Petroleum Hydrocarbons	**6,330**		mg/kg dry	11.4	11.4	1	"	"	"	"	"	
EPH Target PAH Analytes Prepared by method SW846 3545A													
91-20-3	Naphthalene	< 0.380		mg/kg dry	0.380	0.199	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	**13.3**		mg/kg dry	0.380	0.198	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.380		mg/kg dry	0.380	0.222	1	"	"	"	"	"	
83-32-9	Acenaphthene	**2.85**		mg/kg dry	0.380	0.222	1	"	"	"	"	"	
86-73-7	Fluorene	**3.48**		mg/kg dry	0.380	0.224	1	"	"	"	"	"	
85-01-8	Phenanthrene	**7.25**		mg/kg dry	0.380	0.259	1	"	"	"	"	"	
120-12-7	Anthracene	**0.967**		mg/kg dry	0.380	0.281	1	"	"	"	"	"	
206-44-0	Fluoranthene	**0.864**		mg/kg dry	0.380	0.255	1	"	"	"	"	"	
129-00-0	Pyrene	**0.906**		mg/kg dry	0.380	0.274	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 0.380		mg/kg dry	0.380	0.275	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.380		mg/kg dry	0.380	0.295	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 0.380		mg/kg dry	0.380	0.339	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 0.380		mg/kg dry	0.380	0.317	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 0.380		mg/kg dry	0.380	0.255	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 0.380		mg/kg dry	0.380	0.338	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 0.380		mg/kg dry	0.380	0.275	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 0.380		mg/kg dry	0.380	0.285	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*62*			*40-140 %*			"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*51*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*40*			*40-140 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**84.2**		%			1	SM2540 G Mod.	17-Oct-11	17-Oct-11	DT	1121412	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121119 - SW846 5030 Soil (high level)										
Blank (1121119-BLK1)					Prepared & Analyzed: 13-Oct-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0		µg/kg wet	50.0						
Acetone	< 500		µg/kg wet	500						
Acrylonitrile	< 50.0		µg/kg wet	50.0						
Benzene	< 50.0		µg/kg wet	50.0						
Bromobenzene	< 50.0		µg/kg wet	50.0						
Bromochloromethane	< 50.0		µg/kg wet	50.0						
Bromodichloromethane	< 50.0		µg/kg wet	50.0						
Bromoform	< 50.0		µg/kg wet	50.0						
Bromomethane	< 100		µg/kg wet	100						
2-Butanone (MEK)	< 500		µg/kg wet	500						
n-Butylbenzene	< 50.0		µg/kg wet	50.0						
sec-Butylbenzene	< 50.0		µg/kg wet	50.0						
tert-Butylbenzene	< 50.0		µg/kg wet	50.0						
Carbon disulfide	< 100		µg/kg wet	100						
Carbon tetrachloride	< 50.0		µg/kg wet	50.0						
Chlorobenzene	< 50.0		µg/kg wet	50.0						
Chloroethane	< 100		µg/kg wet	100						
Chloroform	< 50.0		µg/kg wet	50.0						
Chloromethane	< 100		µg/kg wet	100						
2-Chlorotoluene	< 50.0		µg/kg wet	50.0						
4-Chlorotoluene	< 50.0		µg/kg wet	50.0						
1,2-Dibromo-3-chloropropane	< 100		µg/kg wet	100						
Dibromochloromethane	< 50.0		µg/kg wet	50.0						
1,2-Dibromoethane (EDB)	< 50.0		µg/kg wet	50.0						
Dibromomethane	< 50.0		µg/kg wet	50.0						
1,2-Dichlorobenzene	< 50.0		µg/kg wet	50.0						
1,3-Dichlorobenzene	< 50.0		µg/kg wet	50.0						
1,4-Dichlorobenzene	< 50.0		µg/kg wet	50.0						
Dichlorodifluoromethane (Freon12)	< 100		µg/kg wet	100						
1,1-Dichloroethane	< 50.0		µg/kg wet	50.0						
1,2-Dichloroethane	< 50.0		µg/kg wet	50.0						
1,1-Dichloroethene	< 50.0		µg/kg wet	50.0						
cis-1,2-Dichloroethene	< 50.0		µg/kg wet	50.0						
trans-1,2-Dichloroethene	< 50.0		µg/kg wet	50.0						
1,2-Dichloropropane	< 50.0		µg/kg wet	50.0						
1,3-Dichloropropane	< 50.0		µg/kg wet	50.0						
2,2-Dichloropropane	< 50.0		µg/kg wet	50.0						
1,1-Dichloropropene	< 50.0		µg/kg wet	50.0						
cis-1,3-Dichloropropene	< 50.0		µg/kg wet	50.0						
trans-1,3-Dichloropropene	< 50.0		µg/kg wet	50.0						
Ethylbenzene	< 50.0		µg/kg wet	50.0						
Hexachlorobutadiene	< 50.0		µg/kg wet	50.0						
2-Hexanone (MBK)	< 500		µg/kg wet	500						
Isopropylbenzene	< 50.0		µg/kg wet	50.0						
4-Isopropyltoluene	< 50.0		µg/kg wet	50.0						
Methyl tert-butyl ether	< 50.0		µg/kg wet	50.0						
4-Methyl-2-pentanone (MIBK)	< 500		µg/kg wet	500						
Methylene chloride	< 100		µg/kg wet	100						
Naphthalene	< 50.0		µg/kg wet	50.0						
n-Propylbenzene	< 50.0		µg/kg wet	50.0						
Styrene	< 50.0		µg/kg wet	50.0						
1,1,1,2-Tetrachloroethane	< 50.0		µg/kg wet	50.0						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121119 - SW846 5030 Soil (high level)										
Blank (1121119-BLK1)					Prepared & Analyzed: 13-Oct-11					
1,1,2,2-Tetrachloroethane	< 50.0		µg/kg wet	50.0						
Tetrachloroethene	< 50.0		µg/kg wet	50.0						
Toluene	< 50.0		µg/kg wet	50.0						
1,2,3-Trichlorobenzene	< 50.0		µg/kg wet	50.0						
1,2,4-Trichlorobenzene	< 50.0		µg/kg wet	50.0						
1,3,5-Trichlorobenzene	< 50.0		µg/kg wet	50.0						
1,1,1-Trichloroethane	< 50.0		µg/kg wet	50.0						
1,1,2-Trichloroethane	< 50.0		µg/kg wet	50.0						
Trichloroethene	< 50.0		µg/kg wet	50.0						
Trichlorofluoromethane (Freon 11)	< 50.0		µg/kg wet	50.0						
1,2,3-Trichloropropane	< 50.0		µg/kg wet	50.0						
1,2,4-Trimethylbenzene	< 50.0		µg/kg wet	50.0						
1,3,5-Trimethylbenzene	< 50.0		µg/kg wet	50.0						
Vinyl chloride	< 50.0		µg/kg wet	50.0						
m,p-Xylene	< 100		µg/kg wet	100						
o-Xylene	< 50.0		µg/kg wet	50.0						
Tetrahydrofuran	< 100		µg/kg wet	100						
Ethyl ether	< 50.0		µg/kg wet	50.0						
Tert-amyl methyl ether	< 50.0		µg/kg wet	50.0						
Ethyl tert-butyl ether	< 50.0		µg/kg wet	50.0						
Di-isopropyl ether	< 50.0		µg/kg wet	50.0						
Tert-Butanol / butyl alcohol	< 500		µg/kg wet	500						
1,4-Dioxane	< 1000		µg/kg wet	1000						
trans-1,4-Dichloro-2-butene	< 250		µg/kg wet	250						
Ethanol	< 20000		µg/kg wet	20000						
Surrogate: 4-Bromofluorobenzene	*27.4*		µg/kg wet		*30.0*		*91*	*70-130*		
Surrogate: Toluene-d8	*28.5*		µg/kg wet		*30.0*		*95*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*27.1*		µg/kg wet		*30.0*		*90*	*70-130*		
Surrogate: Dibromofluoromethane	*30.0*		µg/kg wet		*30.0*		*100*	*70-130*		
LCS (1121119-BS1)					Prepared & Analyzed: 13-Oct-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**17.0**		µg/kg wet		20.0		85	70-130		
Acetone	**18.5**		µg/kg wet		20.0		93	70-130		
Acrylonitrile	**17.7**		µg/kg wet		20.0		88	70-130		
Benzene	**19.3**		µg/kg wet		20.0		96	70-130		
Bromobenzene	**20.5**		µg/kg wet		20.0		102	70-130		
Bromochloromethane	**17.2**		µg/kg wet		20.0		86	70-130		
Bromodichloromethane	**20.6**		µg/kg wet		20.0		103	70-130		
Bromoform	**25.4**		µg/kg wet		20.0		127	70-130		
Bromomethane	**17.3**		µg/kg wet		20.0		86	70-130		
2-Butanone (MEK)	**17.4**		µg/kg wet		20.0		87	70-130		
n-Butylbenzene	**22.4**		µg/kg wet		20.0		112	70-130		
sec-Butylbenzene	**21.8**		µg/kg wet		20.0		109	70-130		
tert-Butylbenzene	**21.8**		µg/kg wet		20.0		109	70-130		
Carbon disulfide	**21.3**		µg/kg wet		20.0		106	70-130		
Carbon tetrachloride	**19.8**		µg/kg wet		20.0		99	70-130		
Chlorobenzene	**20.0**		µg/kg wet		20.0		100	70-130		
Chloroethane	**17.7**		µg/kg wet		20.0		89	70-130		
Chloroform	**18.5**		µg/kg wet		20.0		92	70-130		
Chloromethane	**19.6**		µg/kg wet		20.0		98	70-130		
2-Chlorotoluene	**20.4**		µg/kg wet		20.0		102	70-130		
4-Chlorotoluene	**21.1**		µg/kg wet		20.0		105	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121119 - SW846 5030 Soil (high level)										
LCS (1121119-BS1)					Prepared & Analyzed: 13-Oct-11					
1,2-Dibromo-3-chloropropane	**24.0**		µg/kg wet		20.0		120	70-130		
Dibromochloromethane	**22.7**		µg/kg wet		20.0		114	70-130		
1,2-Dibromoethane (EDB)	**20.1**		µg/kg wet		20.0		101	70-130		
Dibromomethane	**19.5**		µg/kg wet		20.0		97	70-130		
1,2-Dichlorobenzene	**21.2**		µg/kg wet		20.0		106	70-130		
1,3-Dichlorobenzene	**20.7**		µg/kg wet		20.0		104	70-130		
1,4-Dichlorobenzene	**20.4**		µg/kg wet		20.0		102	70-130		
Dichlorodifluoromethane (Freon12)	**17.6**		µg/kg wet		20.0		88	70-130		
1,1-Dichloroethane	**16.8**		µg/kg wet		20.0		84	70-130		
1,2-Dichloroethane	**17.2**		µg/kg wet		20.0		86	70-130		
1,1-Dichloroethene	**17.6**		µg/kg wet		20.0		88	70-130		
cis-1,2-Dichloroethene	**16.7**		µg/kg wet		20.0		84	70-130		
trans-1,2-Dichloroethene	**17.0**		µg/kg wet		20.0		85	70-130		
1,2-Dichloropropane	**19.9**		µg/kg wet		20.0		100	70-130		
1,3-Dichloropropane	**19.1**		µg/kg wet		20.0		96	70-130		
2,2-Dichloropropane	**21.6**		µg/kg wet		20.0		108	70-130		
1,1-Dichloropropene	**18.4**		µg/kg wet		20.0		92	70-130		
cis-1,3-Dichloropropene	**21.2**		µg/kg wet		20.0		106	70-130		
trans-1,3-Dichloropropene	**22.4**		µg/kg wet		20.0		112	70-130		
Ethylbenzene	**21.2**		µg/kg wet		20.0		106	70-130		
Hexachlorobutadiene	**21.1**		µg/kg wet		20.0		105	70-130		
2-Hexanone (MBK)	**20.6**		µg/kg wet		20.0		103	70-130		
Isopropylbenzene	**20.5**		µg/kg wet		20.0		102	70-130		
4-Isopropyltoluene	**22.1**		µg/kg wet		20.0		110	70-130		
Methyl tert-butyl ether	**17.1**		µg/kg wet		20.0		85	70-130		
4-Methyl-2-pentanone (MIBK)	**19.2**		µg/kg wet		20.0		96	70-130		
Methylene chloride	**15.6**		µg/kg wet		20.0		78	70-130		
Naphthalene	**21.0**		µg/kg wet		20.0		105	70-130		
n-Propylbenzene	**22.4**		µg/kg wet		20.0		112	70-130		
Styrene	**20.2**		µg/kg wet		20.0		101	70-130		
1,1,1,2-Tetrachloroethane	**22.4**		µg/kg wet		20.0		112	70-130		
1,1,2,2-Tetrachloroethane	**22.9**		µg/kg wet		20.0		114	70-130		
Tetrachloroethene	**18.5**		µg/kg wet		20.0		93	70-130		
Toluene	**18.8**		µg/kg wet		20.0		94	70-130		
1,2,3-Trichlorobenzene	**22.2**		µg/kg wet		20.0		111	70-130		
1,2,4-Trichlorobenzene	**21.3**		µg/kg wet		20.0		106	70-130		
1,3,5-Trichlorobenzene	**20.8**		µg/kg wet		20.0		104	70-130		
1,1,1-Trichloroethane	**20.0**		µg/kg wet		20.0		100	70-130		
1,1,2-Trichloroethane	**19.5**		µg/kg wet		20.0		98	70-130		
Trichloroethene	**18.5**		µg/kg wet		20.0		92	70-130		
Trichlorofluoromethane (Freon 11)	**17.1**		µg/kg wet		20.0		85	70-130		
1,2,3-Trichloropropane	**20.4**		µg/kg wet		20.0		102	70-130		
1,2,4-Trimethylbenzene	**22.5**		µg/kg wet		20.0		113	70-130		
1,3,5-Trimethylbenzene	**22.5**		µg/kg wet		20.0		113	70-130		
Vinyl chloride	**15.5**		µg/kg wet		20.0		78	70-130		
m,p-Xylene	**44.4**		µg/kg wet		40.0		111	70-130		
o-Xylene	**22.3**		µg/kg wet		20.0		112	70-130		
Tetrahydrofuran	**18.1**		µg/kg wet		20.0		90	70-130		
Ethyl ether	**17.9**		µg/kg wet		20.0		89	70-130		
Tert-amyl methyl ether	**19.8**		µg/kg wet		20.0		99	70-130		
Ethyl tert-butyl ether	**18.9**		µg/kg wet		20.0		95	70-130		
Di-isopropyl ether	**17.5**		µg/kg wet		20.0		87	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121119 - SW846 5030 Soil (high level)										
LCS (1121119-BS1)					Prepared & Analyzed: 13-Oct-11					
Tert-Butanol / butyl alcohol	**186**		µg/kg wet		200		93	70-130		
1,4-Dioxane	**189**		µg/kg wet		200		94	70-130		
trans-1,4-Dichloro-2-butene	**22.4**		µg/kg wet		20.0		112	70-130		
Ethanol	**393**		µg/kg wet		400		98	70-130		
Surrogate: 4-Bromofluorobenzene	*29.2*		µg/kg wet		*30.0*		*98*	*70-130*		
Surrogate: Toluene-d8	*29.0*		µg/kg wet		*30.0*		*97*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*26.5*		µg/kg wet		*30.0*		*88*	*70-130*		
Surrogate: Dibromofluoromethane	*29.4*		µg/kg wet		*30.0*		*98*	*70-130*		
LCS Dup (1121119-BSD1)					Prepared & Analyzed: 13-Oct-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**17.6**		µg/kg wet		20.0		88	70-130	3	25
Acetone	**18.5**		µg/kg wet		20.0		92	70-130	0.3	50
Acrylonitrile	**17.8**		µg/kg wet		20.0		89	70-130	0.6	25
Benzene	**19.8**		µg/kg wet		20.0		99	70-130	3	25
Bromobenzene	**20.8**		µg/kg wet		20.0		104	70-130	2	25
Bromochloromethane	**17.3**		µg/kg wet		20.0		87	70-130	0.6	25
Bromodichloromethane	**20.8**		µg/kg wet		20.0		104	70-130	1	25
Bromoform	**24.9**		µg/kg wet		20.0		124	70-130	2	25
Bromomethane	**18.0**		µg/kg wet		20.0		90	70-130	4	50
2-Butanone (MEK)	**18.2**		µg/kg wet		20.0		91	70-130	5	50
n-Butylbenzene	**22.2**		µg/kg wet		20.0		111	70-130	0.6	25
sec-Butylbenzene	**21.5**		µg/kg wet		20.0		108	70-130	1	25
tert-Butylbenzene	**21.9**		µg/kg wet		20.0		110	70-130	0.7	25
Carbon disulfide	**21.9**		µg/kg wet		20.0		109	70-130	3	25
Carbon tetrachloride	**20.3**		µg/kg wet		20.0		102	70-130	3	25
Chlorobenzene	**20.1**		µg/kg wet		20.0		101	70-130	0.7	25
Chloroethane	**18.5**		µg/kg wet		20.0		92	70-130	4	50
Chloroform	**18.6**		µg/kg wet		20.0		93	70-130	0.9	25
Chloromethane	**20.6**		µg/kg wet		20.0		103	70-130	5	25
2-Chlorotoluene	**20.3**		µg/kg wet		20.0		101	70-130	0.7	25
4-Chlorotoluene	**20.9**		µg/kg wet		20.0		105	70-130	0.7	25
1,2-Dibromo-3-chloropropane	**23.0**		µg/kg wet		20.0		115	70-130	4	25
Dibromochloromethane	**22.6**		µg/kg wet		20.0		113	70-130	0.6	50
1,2-Dibromoethane (EDB)	**20.0**		µg/kg wet		20.0		100	70-130	0.6	25
Dibromomethane	**20.0**		µg/kg wet		20.0		100	70-130	3	25
1,2-Dichlorobenzene	**21.2**		µg/kg wet		20.0		106	70-130	0.3	25
1,3-Dichlorobenzene	**20.5**		µg/kg wet		20.0		102	70-130	1	25
1,4-Dichlorobenzene	**20.4**		µg/kg wet		20.0		102	70-130	0.2	25
Dichlorodifluoromethane (Freon12)	**18.7**		µg/kg wet		20.0		94	70-130	6	50
1,1-Dichloroethane	**17.3**		µg/kg wet		20.0		87	70-130	3	25
1,2-Dichloroethane	**17.6**		µg/kg wet		20.0		88	70-130	2	25
1,1-Dichloroethene	**18.3**		µg/kg wet		20.0		91	70-130	4	25
cis-1,2-Dichloroethene	**17.1**		µg/kg wet		20.0		85	70-130	2	25
trans-1,2-Dichloroethene	**17.9**		µg/kg wet		20.0		90	70-130	5	25
1,2-Dichloropropane	**20.4**		µg/kg wet		20.0		102	70-130	2	25
1,3-Dichloropropane	**19.3**		µg/kg wet		20.0		96	70-130	1	25
2,2-Dichloropropane	**21.9**		µg/kg wet		20.0		109	70-130	1	25
1,1-Dichloropropene	**19.1**		µg/kg wet		20.0		95	70-130	3	25
cis-1,3-Dichloropropene	**21.1**		µg/kg wet		20.0		105	70-130	0.4	25
trans-1,3-Dichloropropene	**22.6**		µg/kg wet		20.0		113	70-130	0.8	25
Ethylbenzene	**21.3**		µg/kg wet		20.0		107	70-130	0.7	25
Hexachlorobutadiene	**19.8**		µg/kg wet		20.0		99	70-130	6	50

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121119 - SW846 5030 Soil (high level)										
LCS Dup (1121119-BSD1)					Prepared & Analyzed: 13-Oct-11					
2-Hexanone (MBK)	**20.3**		µg/kg wet		20.0		101	70-130	1	25
Isopropylbenzene	**20.6**		µg/kg wet		20.0		103	70-130	0.6	25
4-Isopropyltoluene	**22.0**		µg/kg wet		20.0		110	70-130	0.4	25
Methyl tert-butyl ether	**17.3**		µg/kg wet		20.0		87	70-130	1	25
4-Methyl-2-pentanone (MIBK)	**20.4**		µg/kg wet		20.0		102	70-130	6	50
Methylene chloride	**16.4**		µg/kg wet		20.0		82	70-130	5	25
Naphthalene	**20.2**		µg/kg wet		20.0		101	70-130	4	25
n-Propylbenzene	**22.6**		µg/kg wet		20.0		113	70-130	0.6	25
Styrene	**19.9**		µg/kg wet		20.0		100	70-130	1	25
1,1,1,2-Tetrachloroethane	**21.9**		µg/kg wet		20.0		110	70-130	2	25
1,1,2,2-Tetrachloroethane	**22.4**		µg/kg wet		20.0		112	70-130	2	25
Tetrachloroethene	**19.0**		µg/kg wet		20.0		95	70-130	3	25
Toluene	**19.5**		µg/kg wet		20.0		98	70-130	4	25
1,2,3-Trichlorobenzene	**21.0**		µg/kg wet		20.0		105	70-130	6	25
1,2,4-Trichlorobenzene	**20.4**		µg/kg wet		20.0		102	70-130	4	25
1,3,5-Trichlorobenzene	**20.2**		µg/kg wet		20.0		101	70-130	3	25
1,1,1-Trichloroethane	**20.4**		µg/kg wet		20.0		102	70-130	2	25
1,1,2-Trichloroethane	**20.0**		µg/kg wet		20.0		100	70-130	3	25
Trichloroethene	**18.9**		µg/kg wet		20.0		95	70-130	2	25
Trichlorofluoromethane (Freon 11)	**17.8**		µg/kg wet		20.0		89	70-130	4	50
1,2,3-Trichloropropane	**19.8**		µg/kg wet		20.0		99	70-130	3	25
1,2,4-Trimethylbenzene	**22.5**		µg/kg wet		20.0		112	70-130	0.04	25
1,3,5-Trimethylbenzene	**22.4**		µg/kg wet		20.0		112	70-130	0.6	25
Vinyl chloride	**16.6**		µg/kg wet		20.0		83	70-130	6	25
m,p-Xylene	**44.8**		µg/kg wet		40.0		112	70-130	0.8	25
o-Xylene	**22.4**		µg/kg wet		20.0		112	70-130	0.7	25
Tetrahydrofuran	**18.9**		µg/kg wet		20.0		94	70-130	4	25
Ethyl ether	**17.8**		µg/kg wet		20.0		89	70-130	0.3	50
Tert-amyl methyl ether	**19.8**		µg/kg wet		20.0		99	70-130	0.2	25
Ethyl tert-butyl ether	**19.1**		µg/kg wet		20.0		95	70-130	0.8	25
Di-isopropyl ether	**17.4**		µg/kg wet		20.0		87	70-130	0.3	25
Tert-Butanol / butyl alcohol	**186**		µg/kg wet		200		93	70-130	0.3	25
1,4-Dioxane	**187**		µg/kg wet		200		93	70-130	1	25
trans-1,4-Dichloro-2-butene	**22.4**		µg/kg wet		20.0		112	70-130	0.3	25
Ethanol	**409**		µg/kg wet		400		102	70-130	4	30
Surrogate: 4-Bromofluorobenzene	*28.9*		µg/kg wet		*30.0*		*96*	*70-130*		
Surrogate: Toluene-d8	*29.4*		µg/kg wet		*30.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*26.8*		µg/kg wet		*30.0*		*89*	*70-130*		
Surrogate: Dibromofluoromethane	*29.5*		µg/kg wet		*30.0*		*98*	*70-130*		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121369 - SW846 3545A										
Blank (1121369-BLK1)						Prepared & Analyzed: 17-Oct-11				
C9-C18 Aliphatic Hydrocarbons	< 5.00		mg/kg wet	5.00						
C19-C36 Aliphatic Hydrocarbons	< 5.00		mg/kg wet	5.00						
C11-C22 Aromatic Hydrocarbons	< 5.00		mg/kg wet	5.00						
Unadjusted C11-C22 Aromatic Hydrocarbons	< 5.00		mg/kg wet	5.00						
Total Petroleum Hydrocarbons	< 5.00		mg/kg wet	5.00						
Unadjusted Total Petroleum Hydrocarbons	< 5.00		mg/kg wet	5.00						
Naphthalene	< 0.166		mg/kg wet	0.166						
2-Methylnaphthalene	< 0.166		mg/kg wet	0.166						
Acenaphthylene	< 0.166		mg/kg wet	0.166						
Acenaphthene	< 0.166		mg/kg wet	0.166						
Fluorene	< 0.166		mg/kg wet	0.166						
Phenanthrene	< 0.166		mg/kg wet	0.166						
Anthracene	< 0.166		mg/kg wet	0.166						
Fluoranthene	< 0.166		mg/kg wet	0.166						
Pyrene	< 0.166		mg/kg wet	0.166						
Benzo (a) anthracene	< 0.166		mg/kg wet	0.166						
Chrysene	< 0.166		mg/kg wet	0.166						
Benzo (b) fluoranthene	< 0.166		mg/kg wet	0.166						
Benzo (k) fluoranthene	< 0.166		mg/kg wet	0.166						
Benzo (a) pyrene	< 0.166		mg/kg wet	0.166						
Indeno (1,2,3-cd) pyrene	< 0.166		mg/kg wet	0.166						
Dibenzo (a,h) anthracene	< 0.166		mg/kg wet	0.166						
Benzo (g,h,i) perylene	< 0.166		mg/kg wet	0.166						
n-Nonane (C9)	< 0.166		mg/kg wet	0.166						
n-Decane	< 0.166		mg/kg wet	0.166						
n-Dodecane	< 0.166		mg/kg wet	0.166						
n-Tetradecane	< 0.166		mg/kg wet	0.166						
n-Hexadecane	< 0.166		mg/kg wet	0.166						
n-Octadecane	< 0.166		mg/kg wet	0.166						
n-Nonadecane	< 0.166		mg/kg wet	0.166						
n-Eicosane	< 0.166		mg/kg wet	0.166						
n-Docosane	< 0.166		mg/kg wet	0.166						
n-Tetracosane	< 0.166		mg/kg wet	0.166						
n-Hexacosane	< 0.166		mg/kg wet	0.166						
n-Octacosane	< 0.166		mg/kg wet	0.166						
n-Triacontane	< 0.166		mg/kg wet	0.166						
n-Hexatriacontane	< 0.166		mg/kg wet	0.166						
Naphthalene (aliphatic fraction)	**0.00**		mg/kg wet							
2-Methylnaphthalene (aliphatic fraction)	**0.00**		mg/kg wet							
Surrogate: 1-Chlorooctadecane	*2.81*		mg/kg wet		*3.33*		*84*	*40-140*		
Surrogate: Ortho-Terphenyl	*1.45*		mg/kg wet		*3.33*		*43*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.24*		mg/kg wet		*2.67*		*46*	*40-140*		
LCS (1121369-BS1)						Prepared & Analyzed: 17-Oct-11				
C9-C18 Aliphatic Hydrocarbons	**21.5**		mg/kg wet	5.00	40.0		54	40-140		
C19-C36 Aliphatic Hydrocarbons	**40.5**		mg/kg wet	5.00	53.3		76	40-140		
C11-C22 Aromatic Hydrocarbons	**76.7**		mg/kg wet	5.00	113		68	40-140		
Naphthalene	**4.08**		mg/kg wet	0.166	6.67		61	40-140		
2-Methylnaphthalene	**4.32**		mg/kg wet	0.166	6.67		65	40-140		
Acenaphthylene	**4.62**		mg/kg wet	0.166	6.67		69	40-140		
Acenaphthene	**4.64**		mg/kg wet	0.166	6.67		70	40-140		
Fluorene	**5.08**		mg/kg wet	0.166	6.67		76	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121369 - SW846 3545A										
LCS (1121369-BS1)					Prepared & Analyzed: 17-Oct-11					
Phenanthrene	**5.09**		mg/kg wet	0.166	6.67		76	40-140		
Anthracene	**4.90**		mg/kg wet	0.166	6.67		73	40-140		
Fluoranthene	**5.14**		mg/kg wet	0.166	6.67		77	40-140		
Pyrene	**5.13**		mg/kg wet	0.166	6.67		77	40-140		
Benzo (a) anthracene	**5.17**		mg/kg wet	0.166	6.67		78	40-140		
Chrysene	**5.14**		mg/kg wet	0.166	6.67		77	40-140		
Benzo (b) fluoranthene	**5.31**		mg/kg wet	0.166	6.67		80	40-140		
Benzo (k) fluoranthene	**4.71**		mg/kg wet	0.166	6.67		71	40-140		
Benzo (a) pyrene	**4.65**		mg/kg wet	0.166	6.67		70	40-140		
Indeno (1,2,3-cd) pyrene	**5.00**		mg/kg wet	0.166	6.67		75	40-140		
Dibenzo (a,h) anthracene	**4.41**		mg/kg wet	0.166	6.67		66	40-140		
Benzo (g,h,i) perylene	**4.37**		mg/kg wet	0.166	6.67		66	40-140		
n-Nonane (C9)	**2.06**		mg/kg wet	0.166	6.67		31	30-140		
n-Decane	**2.80**		mg/kg wet	0.166	6.67		42	40-140		
n-Dodecane	**3.14**		mg/kg wet	0.166	6.67		47	40-140		
n-Tetradecane	**3.80**		mg/kg wet	0.166	6.67		57	40-140		
n-Hexadecane	**4.29**		mg/kg wet	0.166	6.67		64	40-140		
n-Octadecane	**4.53**		mg/kg wet	0.166	6.67		68	40-140		
n-Nonadecane	**4.60**		mg/kg wet	0.166	6.67		69	40-140		
n-Eicosane	**4.68**		mg/kg wet	0.166	6.67		70	40-140		
n-Docosane	**4.78**		mg/kg wet	0.166	6.67		72	40-140		
n-Tetracosane	**4.79**		mg/kg wet	0.166	6.67		72	40-140		
n-Hexacosane	**4.87**		mg/kg wet	0.166	6.67		73	40-140		
n-Octacosane	**4.97**		mg/kg wet	0.166	6.67		75	40-140		
n-Triacontane	**4.86**		mg/kg wet	0.166	6.67		73	40-140		
n-Hexatriacontane	**4.50**		mg/kg wet	0.166	6.67		67	40-140		
Naphthalene (aliphatic fraction)	**0.00000667**		mg/kg wet		6.67		0.0001	0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00000667**		mg/kg wet		6.67		0.0001	0-200		
Surrogate: 1-Chlorooctadecane	*2.23*		mg/kg wet		*3.33*		*67*	*40-140*		
Surrogate: Ortho-Terphenyl	*2.65*		mg/kg wet		*3.33*		*80*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.98*		mg/kg wet		*2.67*		*74*	*40-140*		
Naphthalene Breakthrough	0.00		%					0-5		
2-Methylnaphthalene Breakthrough	0.00		%					0-5		
LCS (1121369-BS2)					Prepared & Analyzed: 17-Oct-11					
C9-C18 Aliphatic Hydrocarbons	**18.9**		mg/kg wet	5.00	40.0		47	40-140		
C19-C36 Aliphatic Hydrocarbons	**29.8**		mg/kg wet	5.00	53.3		56	40-140		
C11-C22 Aromatic Hydrocarbons	**81.3**		mg/kg wet	5.00	113		72	40-140		
Naphthalene	**3.76**		mg/kg wet	0.166	6.67		56	40-140		
2-Methylnaphthalene	**4.06**		mg/kg wet	0.166	6.67		61	40-140		
Acenaphthylene	**4.52**		mg/kg wet	0.166	6.67		68	40-140		
Acenaphthene	**4.73**		mg/kg wet	0.166	6.67		71	40-140		
Fluorene	**4.88**		mg/kg wet	0.166	6.67		73	40-140		
Phenanthrene	**5.15**		mg/kg wet	0.166	6.67		77	40-140		
Anthracene	**5.22**		mg/kg wet	0.166	6.67		78	40-140		
Fluoranthene	**5.19**		mg/kg wet	0.166	6.67		78	40-140		
Pyrene	**5.13**		mg/kg wet	0.166	6.67		77	40-140		
Benzo (a) anthracene	**5.22**		mg/kg wet	0.166	6.67		78	40-140		
Chrysene	**4.97**		mg/kg wet	0.166	6.67		75	40-140		
Benzo (b) fluoranthene	**5.17**		mg/kg wet	0.166	6.67		77	40-140		
Benzo (k) fluoranthene	**4.48**		mg/kg wet	0.166	6.67		67	40-140		
Benzo (a) pyrene	**4.64**		mg/kg wet	0.166	6.67		70	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121369 - SW846 3545A										
LCS (1121369-BS2)					Prepared & Analyzed: 17-Oct-11					
Indeno (1,2,3-cd) pyrene	**4.83**		mg/kg wet	0.166	6.67		72	40-140		
Dibenzo (a,h) anthracene	**4.20**		mg/kg wet	0.166	6.67		63	40-140		
Benzo (g,h,i) perylene	**4.34**		mg/kg wet	0.166	6.67		65	40-140		
n-Nonane (C9)	**2.23**		mg/kg wet	0.166	6.67		33	30-140		
n-Decane	**2.71**		mg/kg wet	0.166	6.67		41	40-140		
n-Dodecane	**2.84**		mg/kg wet	0.166	6.67		43	40-140		
n-Tetradecane	**2.89**		mg/kg wet	0.166	6.67		43	40-140		
n-Hexadecane	**3.13**		mg/kg wet	0.166	6.67		47	40-140		
n-Octadecane	**3.23**		mg/kg wet	0.166	6.67		48	40-140		
n-Nonadecane	**3.27**		mg/kg wet	0.166	6.67		49	40-140		
n-Eicosane	**3.35**		mg/kg wet	0.166	6.67		50	40-140		
n-Docosane	**3.47**		mg/kg wet	0.166	6.67		52	40-140		
n-Tetracosane	**3.48**		mg/kg wet	0.166	6.67		52	40-140		
n-Hexacosane	**3.49**		mg/kg wet	0.166	6.67		52	40-140		
n-Octacosane	**3.61**		mg/kg wet	0.166	6.67		54	40-140		
n-Triacontane	**3.53**		mg/kg wet	0.166	6.67		53	40-140		
n-Hexatriacontane	**3.36**		mg/kg wet	0.166	6.67		50	40-140		
Naphthalene (aliphatic fraction)	**0.00**		mg/kg wet		6.67			0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		mg/kg wet		6.67			0-200		
Surrogate: 1-Chlorooctadecane	*1.57*		mg/kg wet		*3.33*		*47*	*40-140*		
Surrogate: Ortho-Terphenyl	*2.60*		mg/kg wet		*3.33*		*78*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.94*		mg/kg wet		*2.67*		*73*	*40-140*		
Naphthalene Breakthrough	0.00		%					0-5		
2-Methylnaphthalene Breakthrough	0.00		%					0-5		
LCS Dup (1121369-BSD1)					Prepared & Analyzed: 17-Oct-11					
C9-C18 Aliphatic Hydrocarbons	**17.1**		mg/kg wet	5.00	40.0		43	40-140	22	25
C19-C36 Aliphatic Hydrocarbons	**32.6**		mg/kg wet	5.00	53.3		61	40-140	22	25
C11-C22 Aromatic Hydrocarbons	**64.0**		mg/kg wet	5.00	113		56	40-140	18	25
Naphthalene	**2.67**	QR2	mg/kg wet	0.166	6.67		40	40-140	42	25
2-Methylnaphthalene	**2.86**	QR2	mg/kg wet	0.166	6.67		43	40-140	41	25
Acenaphthylene	**3.16**	QR2	mg/kg wet	0.166	6.67		47	40-140	38	25
Acenaphthene	**3.40**	QR2	mg/kg wet	0.166	6.67		51	40-140	31	25
Fluorene	**3.56**	QR2	mg/kg wet	0.166	6.67		53	40-140	35	25
Phenanthrene	**3.74**	QR2	mg/kg wet	0.166	6.67		56	40-140	31	25
Anthracene	**3.69**	QR2	mg/kg wet	0.166	6.67		55	40-140	28	25
Fluoranthene	**3.82**	QR2	mg/kg wet	0.166	6.67		57	40-140	30	25
Pyrene	**3.90**	QR2	mg/kg wet	0.166	6.67		58	40-140	27	25
Benzo (a) anthracene	**3.62**	QR2	mg/kg wet	0.166	6.67		54	40-140	35	25
Chrysene	**3.66**	QR2	mg/kg wet	0.166	6.67		55	40-140	34	25
Benzo (b) fluoranthene	**3.48**	QR2	mg/kg wet	0.166	6.67		52	40-140	42	25
Benzo (k) fluoranthene	**3.60**	QR2	mg/kg wet	0.166	6.67		54	40-140	27	25
Benzo (a) pyrene	**3.30**	QR2	mg/kg wet	0.166	6.67		50	40-140	34	25
Indeno (1,2,3-cd) pyrene	**3.31**	QR2	mg/kg wet	0.166	6.67		50	40-140	41	25
Dibenzo (a,h) anthracene	**3.02**	QR2	mg/kg wet	0.166	6.67		45	40-140	37	25
Benzo (g,h,i) perylene	**3.07**	QR2	mg/kg wet	0.166	6.67		46	40-140	35	25
n-Nonane (C9)	**2.02**		mg/kg wet	0.166	6.67		30	30-140	2	25
n-Decane	**2.67**		mg/kg wet	0.166	6.67		40	40-140	5	25
n-Dodecane	**2.79**		mg/kg wet	0.166	6.67		42	40-140	12	25
n-Tetradecane	**3.22**		mg/kg wet	0.166	6.67		48	40-140	17	25
n-Hexadecane	**3.49**		mg/kg wet	0.166	6.67		52	40-140	21	25
n-Octadecane	**3.61**		mg/kg wet	0.166	6.67		54	40-140	23	25

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1121369 - SW846 3545A										
LCS Dup (1121369-BSD1)					Prepared & Analyzed: 17-Oct-11					
n-Nonadecane	**3.67**		mg/kg wet	0.166	6.67		55	40-140	23	25
n-Eicosane	**3.75**		mg/kg wet	0.166	6.67		56	40-140	22	25
n-Docosane	**3.88**		mg/kg wet	0.166	6.67		58	40-140	21	25
n-Tetracosane	**3.88**		mg/kg wet	0.166	6.67		58	40-140	21	25
n-Hexacosane	**3.89**		mg/kg wet	0.166	6.67		58	40-140	22	25
n-Octacosane	**4.00**		mg/kg wet	0.166	6.67		60	40-140	22	25
n-Triacontane	**3.90**		mg/kg wet	0.166	6.67		59	40-140	22	25
n-Hexatriacontane	**3.67**		mg/kg wet	0.166	6.67		55	40-140	20	25
Naphthalene (aliphatic fraction)	**0.00**		mg/kg wet		6.67			0-200		200
2-Methylnaphthalene (aliphatic fraction)	**0.00**		mg/kg wet		6.67			0-200		200
Surrogate: 1-Chlorooctadecane	*1.76*		mg/kg wet		*3.33*		*53*	*40-140*		
Surrogate: Ortho-Terphenyl	*1.85*		mg/kg wet		*3.33*		*55*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.52*		mg/kg wet		*2.67*		*57*	*40-140*		
Naphthalene Breakthrough	0.00		%					0-5		
2-Methylnaphthalene Breakthrough	0.00		%					0-5		

Extractable Petroleum Hydrocarbons - CCV Evaluation Report

Analyte(s)	Average RF	CCRF	% D	Limit
Batch S109575				
Calibration Check (S109575-CCV1)				
C9-C18 Aliphatic Hydrocarbons	1.077597E+08	9.478395E+07	-5.5	25
C19-C36 Aliphatic Hydrocarbons	1.129792E+08	9.044693E+07	-3.2	25
C11-C22 Aromatic Hydrocarbons	24.56243	21.28768	-2.9	25
Naphthalene	8.003419	6.873589	-14.1	25
2-Methylnaphthalene	5.351536	4.77073	-10.9	25
Acenaphthylene	7.765333	7.184569	-7.5	25
Acenaphthene	4.869087	4.474024	-8.1	25
Fluorene	5.655684	5.433038	-3.9	25
Phenanthrene	7.874853	7.568513	-3.9	25
Anthracene	6.981425	6.57033	-5.9	25
Fluoranthene	8.318135	8.249431	-0.8	25
Pyrene	8.513716	8.467597	-0.5	25
Benzo (a) anthracene	7.3365	7.855025	7.1	25
Chrysene	7.586051	7.668869	1.1	25
Benzo (b) fluoranthene	6.69292	7.420158	10.9	25
Benzo (k) fluoranthene	7.424765	7.158339	-3.6	25
Benzo (a) pyrene	6.284834	6.466185	2.9	25
Indeno (1,2,3-cd) pyrene	6.995628	7.197114	2.9	25
Dibenzo (a,h) anthracene	6.210598	6.485676	-5.3	25
Benzo (g,h,i) perylene	6.4595	6.256724	-3.1	25
n-Decane	102864.8	90124.4	-12.4	25
n-Dodecane	103161.7	90602.16	-12.2	25
n-Hexadecane	100979	90625.25	-10.3	25
n-Octadecane	98980.42	89414.09	-9.7	25
n-Nonane (C9)	103134.8	89402.19	-13.3	30
n-Tetradecane	101806.9	90700.18	-10.9	25
n-Eicosane	95375.55	86876.61	-8.9	25
n-Docosane	93276.75	85897.03	-7.9	25
n-Nonadecane	97472.38	88339.66	-9.4	25
n-Octacosane	88486.73	83132.21	-6.1	25
n-Tetracosane	91785.2	83872.42	-8.6	25
n-Hexacosane	91457.1	84060.24	-8.1	25
n-Triacontane	90872.17	83251.69	-8.4	25
n-Hexatriacontane	88235.92	81846.08	-7.2	25
Calibration Check (S109575-CCV2)				
C9-C18 Aliphatic Hydrocarbons	1.077597E+08	9.058545E+07	-10.0	25
C19-C36 Aliphatic Hydrocarbons	1.129792E+08	8.311631E+07	-12.0	25
C11-C22 Aromatic Hydrocarbons	24.56243	22.88307	4.7	25
Naphthalene	8.003419	7.880472	-1.5	25
2-Methylnaphthalene	5.351536	5.371291	0.4	25
Acenaphthylene	7.765333	7.97122	2.7	25
Acenaphthene	4.869087	4.896885	0.6	25
Fluorene	5.655684	5.97228	5.6	25
Phenanthrene	7.874853	8.336389	5.9	25
Anthracene	6.981425	8.186503	17.3	25
Fluoranthene	8.318135	8.921206	7.3	25
Pyrene	8.513716	9.08395	6.7	25
Benzo (a) anthracene	7.3365	7.952091	8.4	25
Chrysene	7.586051	7.968923	5.0	25
Benzo (b) fluoranthene	6.69292	7.096345	6.0	25
Benzo (k) fluoranthene	7.424765	7.950519	7.1	25

Extractable Petroleum Hydrocarbons - CCV Evaluation Report

Analyte(s)	Average RF	CCRF	% D	Limit
Batch S109575				
Calibration Check (S109575-CCV2)				
Benzo (a) pyrene	6.284834	6.673901	6.2	25
Indeno (1,2,3-cd) pyrene	6.995628	7.34798	5.0	25
Dibenzo (a,h) anthracene	6.210598	6.647945	-3.1	25
Benzo (g,h,i) perylene	6.4595	6.664194	3.2	25
n-Decane	102864.8	89599.84	-12.9	25
n-Dodecane	103161.7	89686.31	-13.1	25
n-Hexadecane	100979	88081.45	-12.8	25
n-Octadecane	98980.42	84049.35	-15.1	25
n-Nonane (C9)	103134.8	89048.6	-13.7	30
n-Tetradecane	101806.9	89536.43	-12.1	25
n-Eicosane	95375.55	80233.74	-15.9	25
n-Nonadecane	97472.38	82293.67	-15.6	25
n-Docosane	93276.75	78661.37	-15.7	25
n-Tetracosane	91785.2	76713.69	-16.4	25
n-Octacosane	88486.73	76116.6	-14.0	25
n-Hexacosane	91457.1	76869.06	-16.0	25
n-Triacontane	90872.17	75994.15	-16.4	25
n-Hexatriacontane	88235.92	74180.14	-15.9	25

Notes and Definitions

QR2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
R05	Elevated Reporting Limits due to the presence of high levels of non-target analytes.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A Matrix Spike and Matrix Spike Duplicate (MS/MSD) for MADEP EPH CAM may not have been analyzed with the samples in this work order. According to the method these spikes are performed only when requested by the client. If requested the spike recoveries are included in the batch QC data.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
June O'Connor
Kimberly Wisk

SB 37225M

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- [x] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: 10 state st
woburn ma 01801
ECS

Telephone #: 781 246 8897
Project Mgr. Kathy Baxter

Invoice To: ECS

P.O. No.: _____ RQN: 0003

Project No.: ~~66~~ Conway park
Site Name: 05-216613
Location: somerville State: ma
Sampler(s): Kate Ziegler

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9= Deionized Water 10= _____ 11= _____

List preservative code below: 7, 9

QA/QC Reporting Notes:
* additional charges may apply

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: VOCs 8260B	EPH
37225.01	F-N-6 (8')	10/6/11		G	SO	3	1				
.02	F-S-6 (4')	"		G	SO	3	1				
.03	F-S-6 (8')	"		G	SO	3	1				

MA DEP MCP CAM Report: Yes ☐ No ☐
CT DPH RCP Report: Yes ☐ No ☐

QA/QC Reporting Level
☐ Standard ☐ No QC ☐ DQA*
☐ NY ASP A* ☐ NY ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ TIER II* ☐ TIER V*
☐ Other _____

State-specific reporting standards:

frozen DiH_2O vials are in the freezer.

6 1 CH_3OH voa
2 frozen DiH_2O vials
1 8oz jar, unp.

Relinquished by:	Received by:	Date:	Time:	Temp°C
10/6/11 1650		10-7-11	1205	6°
		10/7/11	1730	2.3

☐ EDD Format _____
☐ E-mail to kbaxter@ecsconsult.com

☐ Ambient ☐ Iced ☒ Refrigerated ☐ Fridge temp ____ °C ☐ Freezer temp ____ °C

SB 3725M

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: 10 State St
Woburn MA 01801
ECS

Telephone #: 781 246 8897
Project Mgr. Kathy Baxter

Invoice To: ECS

P.O. No.: _____ RQN: 0003

Project No.: ~~Ac~~ Conway Park (G)
Site Name: 05-21661-3
Location: Somerville State: MA
Sampler(s): Kate Ziegler

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8=$NaHSO_4$ 9=Deionized Water 10=_____ 11=_____

List preservative code below: 7, 9

QA/QC Reporting Notes:
* additional charges may apply

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: VOCs 8260B	EPH
3725.01	F-N-6(8')	10/6/11		G	SO	3	1			✓	
.02	F-S-6(4')	1		G	SO	3	1			✓	
.03	F-S-6(8')	1		G	SO	3	1			✓	✓

MA DEP MCP CAM Report: Yes ☐ No ☐
CT DPH RCP Report: Yes ☐ No ☐

QA/QC Reporting Level
☐ Standard ☐ No QC ☐ DQA*
☐ NY ASP A* ☐ NY ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ TIER II* ☐ TIER V*
☐ Other _____

State-specific reporting standards:

frozen DiH_2O voas are in the freezer.

↳ 1 CH_3OH voa
2 frozen DiH_2O voas
1 8oz jar, unp.

extract + hold F-N-6(8')
+ F-S-6(4') pending results F-S-6(8')

Relinquished by:	Received by:	Date:	Time:	Temp°C
10/6/11 1650		10-7-11	1205	6°
	OK 10	10/7/11	1730	2.3

☐ EDD Format _____
☐ E-mail to kbaxter@ecsconsult.com

☐ Ambient ☐ Iced ☒ Refrigerated ☐ Fridge temp ___°C ☐ Freezer temp ___°C

Report Date:
22-Nov-11 10:06

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Environmental Compliance Services
10 State Street
Woburn, MA 01801
Attn: Kathy Baxter

Project: Conway Park - Somerville, MA
Project #: 05-206613

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SB39147-01	F-N-11(8')	Soil	03-Nov-11 07:30	10-Nov-11 17:40

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.
Please note that this report contains 12 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.	**Project #:** 05-206613
Project Location: Conway Park - Somerville, MA	**RTN:**
This form provides certifications for the following data set: SB39147-01	
Matrices: Soil	

CAM Protocol

✓ 8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	✓ Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?	✓ Yes No

Responses to questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes ✓ No

<u>Data User Note:</u> Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	✓ Yes No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Nicole Leja
Laboratory Director
Date: 11/22/2011

CASE NARRATIVE:

The samples were received 2.0 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Additional dilution factors may be required to keep analyte concentration within instrument calibration.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260C

Calibration:

1111003

Analyte quantified by quadratic equation type calibration.

1,2-Dibromo-3-chloropropane
Bromodichloromethane
Bromoform
Carbon disulfide
cis-1,3-Dichloropropene
Dibromochloromethane
Hexachlorobutadiene
trans-1,3-Dichloropropene

This affected the following samples:

1123865-BLK1
1123865-BS1
1123865-BSD1
F-N-11(8')
S110088-ICV1
S110629-CCV1

Laboratory Control Samples:

1123865 BS/BSD

Vinyl chloride percent recoveries (140/136) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

F-N-11(8')

Samples:

S110629-CCV1

SW846 8260C

Samples:

S110629-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

2-Butanone (MEK) (-25.8%)
Acetone (-21.5%)
Dichlorodifluoromethane (Freon12) (-24.5%)
Ethanol (-22.4%)
Tert-Butanol / butyl alcohol (-26.0%)

This affected the following samples:

1123865-BLK1
1123865-BS1
1123865-BSD1
F-N-11(8')

SB39147-01 *F-N-11(8')*

Elevated Reporting Limits due to the presence of high levels of non-target analytes.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-N-11(8') SB39147-01	05-206613	Soil	03-Nov-11 07:30	10-Nov-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
	VOC Extraction	**Field extracted**		N/A			1	VOC Soil Extraction	12-Nov-11	12-Nov-11	JLH	1123548	
Volatile Organic Compounds			R05										
Prepared by method SW846 5030 Soil (high level)							Initial weight: 15.22 g						
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 638		µg/kg dry	638	425	500	SW846 8260C	16-Nov-11	16-Nov-11	naa	1123865	
67-64-1	Acetone	< 6380		µg/kg dry	6380	4790	500	"	"	"	"	"	
107-13-1	Acrylonitrile	< 638		µg/kg dry	638	571	500	"	"	"	"	"	
71-43-2	Benzene	< 638		µg/kg dry	638	335	500	"	"	"	"	"	
108-86-1	Bromobenzene	< 638		µg/kg dry	638	407	500	"	"	"	"	"	
74-97-5	Bromochloromethane	< 638		µg/kg dry	638	209	500	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 638		µg/kg dry	638	241	500	"	"	"	"	"	
75-25-2	Bromoform	< 638		µg/kg dry	638	441	500	"	"	"	"	"	
74-83-9	Bromomethane	< 1280		µg/kg dry	1280	1150	500	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 6380		µg/kg dry	6380	5470	500	"	"	"	"	"	
104-51-8	n-Butylbenzene	**10,200**		µg/kg dry	638	318	500	"	"	"	"	"	
135-98-8	sec-Butylbenzene	**7,410**		µg/kg dry	638	618	500	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 638		µg/kg dry	638	461	500	"	"	"	"	"	
75-15-0	Carbon disulfide	< 1280		µg/kg dry	1280	911	500	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 638		µg/kg dry	638	634	500	"	"	"	"	"	
108-90-7	Chlorobenzene	< 638		µg/kg dry	638	356	500	"	"	"	"	"	
75-00-3	Chloroethane	< 1280		µg/kg dry	1280	903	500	"	"	"	"	"	
67-66-3	Chloroform	< 638		µg/kg dry	638	312	500	"	"	"	"	"	
74-87-3	Chloromethane	< 1280		µg/kg dry	1280	321	500	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 638		µg/kg dry	638	388	500	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 638		µg/kg dry	638	571	500	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 1280		µg/kg dry	1280	1210	500	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 638		µg/kg dry	638	306	500	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 638		µg/kg dry	638	395	500	"	"	"	"	"	
74-95-3	Dibromomethane	< 638		µg/kg dry	638	636	500	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 638		µg/kg dry	638	513	500	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 638		µg/kg dry	638	634	500	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 638		µg/kg dry	638	430	500	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 1280		µg/kg dry	1280	1080	500	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 638		µg/kg dry	638	582	500	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 638		µg/kg dry	638	356	500	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 638		µg/kg dry	638	316	500	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 638		µg/kg dry	638	268	500	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 638		µg/kg dry	638	529	500	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 638		µg/kg dry	638	325	500	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 638		µg/kg dry	638	321	500	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 638		µg/kg dry	638	257	500	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 638		µg/kg dry	638	393	500	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 638		µg/kg dry	638	347	500	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 638		µg/kg dry	638	180	500	"	"	"	"	"	
100-41-4	Ethylbenzene	< 638		µg/kg dry	638	388	500	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 638		µg/kg dry	638	550	500	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
F-N-11(8') SB39147-01	05-206613	Soil	03-Nov-11 07:30	10-Nov-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds			R05										
Prepared by method SW846 5030 Soil (high level)							Initial weight: 15.22 g						
591-78-6	2-Hexanone (MBK)	< 6380		µg/kg dry	6380	1630	500	SW846 8260C	16-Nov-11	16-Nov-11	naa	1123865	
98-82-8	Isopropylbenzene	**1,720**		µg/kg dry	638	320	500	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 638		µg/kg dry	638	264	500	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	< 638		µg/kg dry	638	464	500	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 6380		µg/kg dry	6380	2070	500	"	"	"	"	"	
75-09-2	Methylene chloride	< 1280		µg/kg dry	1280	324	500	"	"	"	"	"	
91-20-3	Naphthalene	< 638		µg/kg dry	638	396	500	"	"	"	"	"	
103-65-1	n-Propylbenzene	**5,220**		µg/kg dry	638	383	500	"	"	"	"	"	
100-42-5	Styrene	< 638		µg/kg dry	638	472	500	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	< 638		µg/kg dry	638	612	500	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 638		µg/kg dry	638	485	500	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 638		µg/kg dry	638	365	500	"	"	"	"	"	
108-88-3	Toluene	< 638		µg/kg dry	638	571	500	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 638		µg/kg dry	638	552	500	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 638		µg/kg dry	638	479	500	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 638		µg/kg dry	638	451	500	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 638		µg/kg dry	638	511	500	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 638		µg/kg dry	638	548	500	"	"	"	"	"	
79-01-6	Trichloroethene	< 638		µg/kg dry	638	488	500	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	< 638		µg/kg dry	638	258	500	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 638		µg/kg dry	638	288	500	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 638		µg/kg dry	638	208	500	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 638		µg/kg dry	638	632	500	"	"	"	"	"	
75-01-4	Vinyl chloride	< 638		µg/kg dry	638	598	500	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 1280		µg/kg dry	1280	1240	500	"	"	"	"	"	
95-47-6	o-Xylene	< 638		µg/kg dry	638	435	500	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 1280		µg/kg dry	1280	1180	500	"	"	"	"	"	
60-29-7	Ethyl ether	< 638		µg/kg dry	638	595	500	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	< 638		µg/kg dry	638	503	500	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 638		µg/kg dry	638	223	500	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 638		µg/kg dry	638	205	500	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 6380		µg/kg dry	6380	3610	500	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 12800		µg/kg dry	12800	10400	500	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-butene	< 3190		µg/kg dry	3190	1630	500	"	"	"	"	"	
64-17-5	Ethanol	< 255000		µg/kg dry	255000	53300	500	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*105*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*104*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*103*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*97*			*70-130 %*			"	"	"	"	"	
General Chemistry Parameters													
	% Solids	**87.3**		%			1	SM2540 G Mod.	15-Nov-11	15-Nov-11	DT	1123717	

This laboratory report is not valid without an authorized signature on the cover page.

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1123865 - SW846 5030 Soil (high level)										
Blank (1123865-BLK1)					Prepared & Analyzed: 16-Nov-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0		µg/kg wet	50.0						
Acetone	< 500		µg/kg wet	500						
Acrylonitrile	< 50.0		µg/kg wet	50.0						
Benzene	< 50.0		µg/kg wet	50.0						
Bromobenzene	< 50.0		µg/kg wet	50.0						
Bromochloromethane	< 50.0		µg/kg wet	50.0						
Bromodichloromethane	< 50.0		µg/kg wet	50.0						
Bromoform	< 50.0		µg/kg wet	50.0						
Bromomethane	< 100		µg/kg wet	100						
2-Butanone (MEK)	< 500		µg/kg wet	500						
n-Butylbenzene	< 50.0		µg/kg wet	50.0						
sec-Butylbenzene	< 50.0		µg/kg wet	50.0						
tert-Butylbenzene	< 50.0		µg/kg wet	50.0						
Carbon disulfide	< 100		µg/kg wet	100						
Carbon tetrachloride	< 50.0		µg/kg wet	50.0						
Chlorobenzene	< 50.0		µg/kg wet	50.0						
Chloroethane	< 100		µg/kg wet	100						
Chloroform	< 50.0		µg/kg wet	50.0						
Chloromethane	< 100		µg/kg wet	100						
2-Chlorotoluene	< 50.0		µg/kg wet	50.0						
4-Chlorotoluene	< 50.0		µg/kg wet	50.0						
1,2-Dibromo-3-chloropropane	< 100		µg/kg wet	100						
Dibromochloromethane	< 50.0		µg/kg wet	50.0						
1,2-Dibromoethane (EDB)	< 50.0		µg/kg wet	50.0						
Dibromomethane	< 50.0		µg/kg wet	50.0						
1,2-Dichlorobenzene	< 50.0		µg/kg wet	50.0						
1,3-Dichlorobenzene	< 50.0		µg/kg wet	50.0						
1,4-Dichlorobenzene	< 50.0		µg/kg wet	50.0						
Dichlorodifluoromethane (Freon12)	< 100		µg/kg wet	100						
1,1-Dichloroethane	< 50.0		µg/kg wet	50.0						
1,2-Dichloroethane	< 50.0		µg/kg wet	50.0						
1,1-Dichloroethene	< 50.0		µg/kg wet	50.0						
cis-1,2-Dichloroethene	< 50.0		µg/kg wet	50.0						
trans-1,2-Dichloroethene	< 50.0		µg/kg wet	50.0						
1,2-Dichloropropane	< 50.0		µg/kg wet	50.0						
1,3-Dichloropropane	< 50.0		µg/kg wet	50.0						
2,2-Dichloropropane	< 50.0		µg/kg wet	50.0						
1,1-Dichloropropene	< 50.0		µg/kg wet	50.0						
cis-1,3-Dichloropropene	< 50.0		µg/kg wet	50.0						
trans-1,3-Dichloropropene	< 50.0		µg/kg wet	50.0						
Ethylbenzene	< 50.0		µg/kg wet	50.0						
Hexachlorobutadiene	< 50.0		µg/kg wet	50.0						
2-Hexanone (MBK)	< 500		µg/kg wet	500						
Isopropylbenzene	< 50.0		µg/kg wet	50.0						
4-Isopropyltoluene	< 50.0		µg/kg wet	50.0						
Methyl tert-butyl ether	< 50.0		µg/kg wet	50.0						
4-Methyl-2-pentanone (MIBK)	< 500		µg/kg wet	500						
Methylene chloride	< 100		µg/kg wet	100						
Naphthalene	< 50.0		µg/kg wet	50.0						
n-Propylbenzene	< 50.0		µg/kg wet	50.0						
Styrene	< 50.0		µg/kg wet	50.0						
1,1,1,2-Tetrachloroethane	< 50.0		µg/kg wet	50.0						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1123865 - SW846 5030 Soil (high level)										
Blank (1123865-BLK1)					Prepared & Analyzed: 16-Nov-11					
1,1,2,2-Tetrachloroethane	< 50.0		µg/kg wet	50.0						
Tetrachloroethene	< 50.0		µg/kg wet	50.0						
Toluene	< 50.0		µg/kg wet	50.0						
1,2,3-Trichlorobenzene	< 50.0		µg/kg wet	50.0						
1,2,4-Trichlorobenzene	< 50.0		µg/kg wet	50.0						
1,3,5-Trichlorobenzene	< 50.0		µg/kg wet	50.0						
1,1,1-Trichloroethane	< 50.0		µg/kg wet	50.0						
1,1,2-Trichloroethane	< 50.0		µg/kg wet	50.0						
Trichloroethene	< 50.0		µg/kg wet	50.0						
Trichlorofluoromethane (Freon 11)	< 50.0		µg/kg wet	50.0						
1,2,3-Trichloropropane	< 50.0		µg/kg wet	50.0						
1,2,4-Trimethylbenzene	< 50.0		µg/kg wet	50.0						
1,3,5-Trimethylbenzene	< 50.0		µg/kg wet	50.0						
Vinyl chloride	< 50.0		µg/kg wet	50.0						
m,p-Xylene	< 100		µg/kg wet	100						
o-Xylene	< 50.0		µg/kg wet	50.0						
Tetrahydrofuran	< 100		µg/kg wet	100						
Ethyl ether	< 50.0		µg/kg wet	50.0						
Tert-amyl methyl ether	< 50.0		µg/kg wet	50.0						
Ethyl tert-butyl ether	< 50.0		µg/kg wet	50.0						
Di-isopropyl ether	< 50.0		µg/kg wet	50.0						
Tert-Butanol / butyl alcohol	< 500		µg/kg wet	500						
1,4-Dioxane	< 1000		µg/kg wet	1000						
trans-1,4-Dichloro-2-butene	< 250		µg/kg wet	250						
Ethanol	< 20000		µg/kg wet	20000						
Surrogate: 4-Bromofluorobenzene	*28.3*		µg/kg wet		*30.0*		*94*	*70-130*		
Surrogate: Toluene-d8	*30.4*		µg/kg wet		*30.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*30.9*		µg/kg wet		*30.0*		*103*	*70-130*		
Surrogate: Dibromofluoromethane	*29.6*		µg/kg wet		*30.0*		*99*	*70-130*		
LCS (1123865-BS1)					Prepared & Analyzed: 16-Nov-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**20.3**		µg/kg wet		20.0		102	70-130		
Acetone	**16.4**		µg/kg wet		20.0		82	70-130		
Acrylonitrile	**18.4**		µg/kg wet		20.0		92	70-130		
Benzene	**19.6**		µg/kg wet		20.0		98	70-130		
Bromobenzene	**20.2**		µg/kg wet		20.0		101	70-130		
Bromochloromethane	**19.8**		µg/kg wet		20.0		99	70-130		
Bromodichloromethane	**21.5**		µg/kg wet		20.0		108	70-130		
Bromoform	**18.4**		µg/kg wet		20.0		92	70-130		
Bromomethane	**21.5**		µg/kg wet		20.0		108	70-130		
2-Butanone (MEK)	**16.6**		µg/kg wet		20.0		83	70-130		
n-Butylbenzene	**24.0**		µg/kg wet		20.0		120	70-130		
sec-Butylbenzene	**23.2**		µg/kg wet		20.0		116	70-130		
tert-Butylbenzene	**23.5**		µg/kg wet		20.0		118	70-130		
Carbon disulfide	**22.5**		µg/kg wet		20.0		112	70-130		
Carbon tetrachloride	**21.6**		µg/kg wet		20.0		108	70-130		
Chlorobenzene	**19.2**		µg/kg wet		20.0		96	70-130		
Chloroethane	**19.6**		µg/kg wet		20.0		98	70-130		
Chloroform	**20.5**		µg/kg wet		20.0		103	70-130		
Chloromethane	**20.2**		µg/kg wet		20.0		101	70-130		
2-Chlorotoluene	**19.8**		µg/kg wet		20.0		99	70-130		
4-Chlorotoluene	**21.1**		µg/kg wet		20.0		106	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1123865 - SW846 5030 Soil (high level)										
LCS (1123865-BS1)					Prepared & Analyzed: 16-Nov-11					
1,2-Dibromo-3-chloropropane	**17.1**		µg/kg wet		20.0		86	70-130		
Dibromochloromethane	**20.7**		µg/kg wet		20.0		104	70-130		
1,2-Dibromoethane (EDB)	**19.7**		µg/kg wet		20.0		99	70-130		
Dibromomethane	**18.6**		µg/kg wet		20.0		93	70-130		
1,2-Dichlorobenzene	**20.8**		µg/kg wet		20.0		104	70-130		
1,3-Dichlorobenzene	**19.5**		µg/kg wet		20.0		98	70-130		
1,4-Dichlorobenzene	**19.6**		µg/kg wet		20.0		98	70-130		
Dichlorodifluoromethane (Freon12)	**19.2**		µg/kg wet		20.0		96	70-130		
1,1-Dichloroethane	**19.6**		µg/kg wet		20.0		98	70-130		
1,2-Dichloroethane	**19.7**		µg/kg wet		20.0		98	70-130		
1,1-Dichloroethene	**20.1**		µg/kg wet		20.0		100	70-130		
cis-1,2-Dichloroethene	**19.4**		µg/kg wet		20.0		97	70-130		
trans-1,2-Dichloroethene	**19.6**		µg/kg wet		20.0		98	70-130		
1,2-Dichloropropane	**20.3**		µg/kg wet		20.0		101	70-130		
1,3-Dichloropropane	**19.2**		µg/kg wet		20.0		96	70-130		
2,2-Dichloropropane	**20.5**		µg/kg wet		20.0		102	70-130		
1,1-Dichloropropene	**20.9**		µg/kg wet		20.0		104	70-130		
cis-1,3-Dichloropropene	**21.4**		µg/kg wet		20.0		107	70-130		
trans-1,3-Dichloropropene	**20.9**		µg/kg wet		20.0		104	70-130		
Ethylbenzene	**22.3**		µg/kg wet		20.0		112	70-130		
Hexachlorobutadiene	**23.8**		µg/kg wet		20.0		119	70-130		
2-Hexanone (MBK)	**18.3**		µg/kg wet		20.0		91	70-130		
Isopropylbenzene	**20.5**		µg/kg wet		20.0		102	70-130		
4-Isopropyltoluene	**23.8**		µg/kg wet		20.0		119	70-130		
Methyl tert-butyl ether	**18.9**		µg/kg wet		20.0		94	70-130		
4-Methyl-2-pentanone (MIBK)	**17.7**		µg/kg wet		20.0		88	70-130		
Methylene chloride	**18.6**		µg/kg wet		20.0		93	70-130		
Naphthalene	**20.0**		µg/kg wet		20.0		100	70-130		
n-Propylbenzene	**23.4**		µg/kg wet		20.0		117	70-130		
Styrene	**20.6**		µg/kg wet		20.0		103	70-130		
1,1,1,2-Tetrachloroethane	**21.1**		µg/kg wet		20.0		106	70-130		
1,1,2,2-Tetrachloroethane	**18.2**		µg/kg wet		20.0		91	70-130		
Tetrachloroethene	**19.5**		µg/kg wet		20.0		97	70-130		
Toluene	**20.0**		µg/kg wet		20.0		100	70-130		
1,2,3-Trichlorobenzene	**22.1**		µg/kg wet		20.0		111	70-130		
1,2,4-Trichlorobenzene	**22.2**		µg/kg wet		20.0		111	70-130		
1,3,5-Trichlorobenzene	**21.2**		µg/kg wet		20.0		106	70-130		
1,1,1-Trichloroethane	**22.0**		µg/kg wet		20.0		110	70-130		
1,1,2-Trichloroethane	**19.4**		µg/kg wet		20.0		97	70-130		
Trichloroethene	**20.2**		µg/kg wet		20.0		101	70-130		
Trichlorofluoromethane (Freon 11)	**20.9**		µg/kg wet		20.0		104	70-130		
1,2,3-Trichloropropane	**18.0**		µg/kg wet		20.0		90	70-130		
1,2,4-Trimethylbenzene	**24.2**		µg/kg wet		20.0		121	70-130		
1,3,5-Trimethylbenzene	**24.2**		µg/kg wet		20.0		121	70-130		
Vinyl chloride	**28.1**	QC2	µg/kg wet		20.0		140	70-130		
m,p-Xylene	**44.5**		µg/kg wet		40.0		111	70-130		
o-Xylene	**21.9**		µg/kg wet		20.0		110	70-130		
Tetrahydrofuran	**19.2**		µg/kg wet		20.0		96	70-130		
Ethyl ether	**18.7**		µg/kg wet		20.0		94	70-130		
Tert-amyl methyl ether	**19.8**		µg/kg wet		20.0		99	70-130		
Ethyl tert-butyl ether	**22.7**		µg/kg wet		20.0		114	70-130		
Di-isopropyl ether	**20.3**		µg/kg wet		20.0		102	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1123865 - SW846 5030 Soil (high level)										
LCS (1123865-BS1)					Prepared & Analyzed: 16-Nov-11					
Tert-Butanol / butyl alcohol	**161**		µg/kg wet		200		81	70-130		
1,4-Dioxane	**193**		µg/kg wet		200		96	70-130		
trans-1,4-Dichloro-2-butene	**17.7**		µg/kg wet		20.0		88	70-130		
Ethanol	**344**		µg/kg wet		400		86	70-130		
Surrogate: 4-Bromofluorobenzene	*29.4*		µg/kg wet		*30.0*		*98*	*70-130*		
Surrogate: Toluene-d8	*30.7*		µg/kg wet		*30.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*30.2*		µg/kg wet		*30.0*		*100*	*70-130*		
Surrogate: Dibromofluoromethane	*33.1*		µg/kg wet		*30.0*		*110*	*70-130*		
LCS Dup (1123865-BSD1)					Prepared & Analyzed: 16-Nov-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**21.0**		µg/kg wet		20.0		105	70-130	3	25
Acetone	**16.2**		µg/kg wet		20.0		81	70-130	2	50
Acrylonitrile	**17.9**		µg/kg wet		20.0		89	70-130	3	25
Benzene	**19.1**		µg/kg wet		20.0		95	70-130	3	25
Bromobenzene	**19.9**		µg/kg wet		20.0		100	70-130	1	25
Bromochloromethane	**18.8**		µg/kg wet		20.0		94	70-130	5	25
Bromodichloromethane	**20.9**		µg/kg wet		20.0		104	70-130	3	25
Bromoform	**18.5**		µg/kg wet		20.0		93	70-130	0.5	25
Bromomethane	**20.4**		µg/kg wet		20.0		102	70-130	6	50
2-Butanone (MEK)	**16.3**		µg/kg wet		20.0		81	70-130	2	50
n-Butylbenzene	**23.0**		µg/kg wet		20.0		115	70-130	4	25
sec-Butylbenzene	**22.4**		µg/kg wet		20.0		112	70-130	3	25
tert-Butylbenzene	**22.8**		µg/kg wet		20.0		114	70-130	3	25
Carbon disulfide	**21.6**		µg/kg wet		20.0		108	70-130	4	25
Carbon tetrachloride	**20.8**		µg/kg wet		20.0		104	70-130	4	25
Chlorobenzene	**18.8**		µg/kg wet		20.0		94	70-130	2	25
Chloroethane	**18.7**		µg/kg wet		20.0		94	70-130	5	50
Chloroform	**19.8**		µg/kg wet		20.0		99	70-130	4	25
Chloromethane	**19.4**		µg/kg wet		20.0		97	70-130	4	25
2-Chlorotoluene	**19.5**		µg/kg wet		20.0		97	70-130	1	25
4-Chlorotoluene	**20.6**		µg/kg wet		20.0		103	70-130	2	25
1,2-Dibromo-3-chloropropane	**16.5**		µg/kg wet		20.0		82	70-130	4	25
Dibromochloromethane	**20.6**		µg/kg wet		20.0		103	70-130	0.6	50
1,2-Dibromoethane (EDB)	**19.5**		µg/kg wet		20.0		98	70-130	0.9	25
Dibromomethane	**18.7**		µg/kg wet		20.0		94	70-130	0.4	25
1,2-Dichlorobenzene	**20.2**		µg/kg wet		20.0		101	70-130	3	25
1,3-Dichlorobenzene	**19.0**		µg/kg wet		20.0		95	70-130	3	25
1,4-Dichlorobenzene	**18.6**		µg/kg wet		20.0		93	70-130	5	25
Dichlorodifluoromethane (Freon12)	**19.0**		µg/kg wet		20.0		95	70-130	1	50
1,1-Dichloroethane	**18.9**		µg/kg wet		20.0		94	70-130	4	25
1,2-Dichloroethane	**19.3**		µg/kg wet		20.0		97	70-130	2	25
1,1-Dichloroethene	**19.3**		µg/kg wet		20.0		96	70-130	4	25
cis-1,2-Dichloroethene	**18.9**		µg/kg wet		20.0		95	70-130	3	25
trans-1,2-Dichloroethene	**18.8**		µg/kg wet		20.0		94	70-130	4	25
1,2-Dichloropropane	**19.9**		µg/kg wet		20.0		100	70-130	2	25
1,3-Dichloropropane	**18.9**		µg/kg wet		20.0		94	70-130	2	25
2,2-Dichloropropane	**18.7**		µg/kg wet		20.0		94	70-130	9	25
1,1-Dichloropropene	**20.2**		µg/kg wet		20.0		101	70-130	3	25
cis-1,3-Dichloropropene	**20.8**		µg/kg wet		20.0		104	70-130	3	25
trans-1,3-Dichloropropene	**20.7**		µg/kg wet		20.0		103	70-130	1	25
Ethylbenzene	**21.8**		µg/kg wet		20.0		109	70-130	2	25
Hexachlorobutadiene	**23.3**		µg/kg wet		20.0		116	70-130	2	50

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1123865 - SW846 5030 Soil (high level)										
LCS Dup (1123865-BSD1)					Prepared & Analyzed: 16-Nov-11					
2-Hexanone (MBK)	**16.6**		µg/kg wet		20.0		83	70-130	10	25
Isopropylbenzene	**20.2**		µg/kg wet		20.0		101	70-130	1	25
4-Isopropyltoluene	**22.7**		µg/kg wet		20.0		114	70-130	4	25
Methyl tert-butyl ether	**18.8**		µg/kg wet		20.0		94	70-130	0.7	25
4-Methyl-2-pentanone (MIBK)	**17.8**		µg/kg wet		20.0		89	70-130	0.7	50
Methylene chloride	**18.1**		µg/kg wet		20.0		91	70-130	3	25
Naphthalene	**19.4**		µg/kg wet		20.0		97	70-130	3	25
n-Propylbenzene	**22.7**		µg/kg wet		20.0		114	70-130	3	25
Styrene	**20.1**		µg/kg wet		20.0		100	70-130	3	25
1,1,1,2-Tetrachloroethane	**20.5**		µg/kg wet		20.0		102	70-130	3	25
1,1,2,2-Tetrachloroethane	**17.8**		µg/kg wet		20.0		89	70-130	2	25
Tetrachloroethene	**19.6**		µg/kg wet		20.0		98	70-130	0.7	25
Toluene	**19.4**		µg/kg wet		20.0		97	70-130	3	25
1,2,3-Trichlorobenzene	**21.5**		µg/kg wet		20.0		107	70-130	3	25
1,2,4-Trichlorobenzene	**20.9**		µg/kg wet		20.0		104	70-130	6	25
1,3,5-Trichlorobenzene	**20.3**		µg/kg wet		20.0		102	70-130	4	25
1,1,1-Trichloroethane	**21.0**		µg/kg wet		20.0		105	70-130	4	25
1,1,2-Trichloroethane	**18.6**		µg/kg wet		20.0		93	70-130	4	25
Trichloroethene	**19.0**		µg/kg wet		20.0		95	70-130	6	25
Trichlorofluoromethane (Freon 11)	**20.1**		µg/kg wet		20.0		101	70-130	4	50
1,2,3-Trichloropropane	**17.5**		µg/kg wet		20.0		87	70-130	3	25
1,2,4-Trimethylbenzene	**23.5**		µg/kg wet		20.0		118	70-130	3	25
1,3,5-Trimethylbenzene	**23.5**		µg/kg wet		20.0		118	70-130	3	25
Vinyl chloride	**27.3**	QC2	µg/kg wet		20.0		136	70-130	3	25
m,p-Xylene	**43.1**		µg/kg wet		40.0		108	70-130	3	25
o-Xylene	**21.2**		µg/kg wet		20.0		106	70-130	3	25
Tetrahydrofuran	**18.9**		µg/kg wet		20.0		95	70-130	1	25
Ethyl ether	**17.9**		µg/kg wet		20.0		90	70-130	5	50
Tert-amyl methyl ether	**19.4**		µg/kg wet		20.0		97	70-130	2	25
Ethyl tert-butyl ether	**22.1**		µg/kg wet		20.0		110	70-130	3	25
Di-isopropyl ether	**19.7**		µg/kg wet		20.0		99	70-130	3	25
Tert-Butanol / butyl alcohol	**158**		µg/kg wet		200		79	70-130	2	25
1,4-Dioxane	**198**		µg/kg wet		200		99	70-130	3	25
trans-1,4-Dichloro-2-butene	**18.1**		µg/kg wet		20.0		91	70-130	2	25
Ethanol	**321**		µg/kg wet		400		80	70-130	7	30
Surrogate: 4-Bromofluorobenzene	*30.3*		µg/kg wet		*30.0*		*101*	*70-130*		
Surrogate: Toluene-d8	*30.9*		µg/kg wet		*30.0*		*103*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*30.5*		µg/kg wet		*30.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*33.0*		µg/kg wet		*30.0*		*110*	*70-130*		

Notes and Definitions

QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
R05	Elevated Reporting Limits due to the presence of high levels of non-target analytes.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Nicole Leja

SB 39147M

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: ________
· All TATs subject to laboratory approval.
· Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: ECS
10 State St
Woburn MA 01801

Telephone #: 781 246 8897
Project Mgr. Kathy Baxter

Invoice To: ECS.

P.O. No.: ________ RQN: 0002

Project No.: 05-206613
Site Name: Conway park ice rink
Location: Somerville State: MA
Sampler(s): K. Ziegler

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9= Deionized Water 10=________ 11=________

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=________ X2=________ X3=________

G=Grab C=Composite

List preservative code below:

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	X VOCs 8260B							
39147.01	F-N-11(8')	11/3/11	730	G	SO	3	1			X							

Containers: (# of VOA Vials, # of Amber Glass, # of Clear Glass, # of Plastic) — Analyses: (VOCs 8260B)

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report: Yes ☒ No ☐
CT DPH RCP Report: Yes ☐ No ☐

QA/QC Reporting Level
☒ Standard ☐ No QC ☐ DQA*
☐ NY ASP A* ☐ NY ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ TIER II* ☐ TIER V*
☐ Other ________

State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp°C
[signature] 11/10/11 900	[signature]	11/10/11	1210	
[signature]	[signature]	11/10/11	1740	2.0

☐ EDD Format pdf
☒ E-mail to kbaxter@ecsconsult.com

☐ Ambient ☐ Iced ☒ Refrigerated ☐ Fridge temp ___°C ☐ Freezer temp ___°C

ANALYTICAL REPORT

Thursday, December 22, 2011

GeoLabs, Inc.
45 Johnson Lane
Braintree MA 02184
Tele: 781 848 7844
Fax: 781 848 7811

Mike Bundy
EST
51 Fremont Street
Needham, MA 02494

TEL: (781) 455-0003
FAX: (781) 455-8336

Project: Somerville Ice Rink
Location:

Order No.: 1112187

Dear Mike Bundy:

GeoLabs, Inc. received 3 sample(s) on 12/16/2011 for the analyses presented in the following report.

The laboratory results in this report relate only to samples submitted.

All data for associated QC met method or laboratory specifications, except when noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Mick
Laboratory Director

For current certifications, please visit our website at www.geolabs.com

Certifications:

CT (PH-0148) - MA (M-MA015) - ME (MA0015) - NH (2508) - NJ (MA009) - RI (LA000252)

Accredited in Accordance with NELAC

Date: *22-Dec-11*

CLIENT:	EST
Project:	Somerville Ice Rink
Lab Order:	1112187

CASE NARRATIVE

Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation.

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

All extractable samples were extracted and analyzed and any Volatile samples were analyzed within method specified holding times and according to GeoLabs documented Standard Operating Procedure. No analytical anomalies or non-conformances were noted by the laboratory during the processing of these samples.

SIGNATURE:  LAB DIRECTOR

PRINTED NAME: David Mick DATE: December 22, 2011

ANALYTICAL REPORT

Reported Date: 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-1
Lab Order:	1112187	**Collection Date:**	12/15/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-001	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
TOTAL PETROLEUM HYDROCARBONS - 8100M						Analyst: **Jsi**
Prep Method: (8100M)			**Prep Date: 12/21/2011 1:49:13 PM**			
Total Petroleum Hydrocarbons	*176*	56.8		mg/Kg-dry	1	12/19/2011
Surr: o-Terphenyl	103	40-140		%REC	1	12/19/2011
POLYCHLORINATED BIPHENYLS - SW8082						Analyst: **KG**
Prep Method: (SW3545A)			**Prep Date: 12/21/2011 3:19:04 PM**			
Aroclor 1016	ND	56.8		µg/Kg-dry	1	12/22/2011
Aroclor 1221	ND	114		µg/Kg-dry	1	12/22/2011
Aroclor 1232	ND	56.8		µg/Kg-dry	1	12/22/2011
Aroclor 1242	ND	56.8		µg/Kg-dry	1	12/22/2011
Aroclor 1248	ND	56.8		µg/Kg-dry	1	12/22/2011
Aroclor 1254	*771*	56.8		µg/Kg-dry	1	12/22/2011
Aroclor 1260	ND	56.8		µg/Kg-dry	1	12/22/2011
Surr: Decachlorobiphenyl Sig 1	96.1	30-150		%REC	1	12/22/2011
Surr: Decachlorobiphenyl Sig 2	82.7	30-150		%REC	1	12/22/2011
Surr: Tetrachloro-m-Xylene Sig 1	67.9	30-150		%REC	1	12/22/2011
Surr: Tetrachloro-m-Xylene Sig 2	85.0	30-150		%REC	1	12/22/2011
MERCURY - SW7471A						Analyst: **EC**
Prep Method: (SW7471A)			**Prep Date: 12/20/2011 2:49:16 PM**			
Mercury	*0.366*	0.284		mg/Kg-dry	1	12/20/2011
RCRA METALS W/O HG - SW6010B						Analyst: **QS**
Prep Method: (SW3050B)			**Prep Date: 12/21/2011 12:51:50 PM**			
Arsenic	ND	5.64		mg/Kg-dry	1	12/21/2011
Barium	*63.1*	5.64		mg/Kg-dry	1	12/21/2011
Cadmium	*9.48*	1.13		mg/Kg-dry	1	12/21/2011
Chromium	*16.8*	5.64		mg/Kg-dry	1	12/21/2011
Lead	*789*	5.64		mg/Kg-dry	1	12/21/2011
Selenium	ND	5.64		mg/Kg-dry	1	12/21/2011
Silver	ND	11.3		mg/Kg-dry	1	12/21/2011

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside recovery limits
- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-1
Lab Order:	1112187	**Collection Date:**	12/15/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-001	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
TCLP LEAD - 6010B						Analyst: **QS**
Prep Method: (SW3010A)			**Prep Date:**	**12/22/2011 12:09:08 PM**		
Lead	*3.20*	0.0500		mg/L	5	12/22/2011
SEMIVOLATILE ORGANICS - SW8270C						Analyst: **ZYZ**
Prep Method: (SW3545A)			**Prep Date:**	**12/21/2011 2:57:56 PM**		
1,1'-Biphenyl	ND	11.4		µg/Kg-dry	1	12/21/2011 2:29:00 PM
1,2,4-Trichlorobenzene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
1,2-Dichlorobenzene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
1,2-Dinitrobenzene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
1,3-Dichlorobenzene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
1,3-Dinitrobenzene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
1,4-Dichlorobenzene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
1,4-Dinitrobenzene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2,3,4,6-Tetrachlorophenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2,4,5-Trichlorophenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2,4,6-Trichlorophenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2,4-Dichlorophenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2,4-Dimethylphenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2,4-Dinitrophenol	ND	568		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2,4-Dinitrotoluene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2,6-Dinitrotoluene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2-Chloronaphthalene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2-Chlorophenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2-Methylnaphthalene	*435*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2-Methylphenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2-Nitroaniline	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
2-Nitrophenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
3,3'-Dichlorobenzidine	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
3-Methylphenol/4-Methylphenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
3-Nitroaniline	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
4,6-Dinitro-2-Methylphenol	ND	568		µg/Kg-dry	1	12/21/2011 2:29:00 PM
4-Bromophenyl Phenyl Ether	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
4-Chloro-3-Methylphenol	ND	568		µg/Kg-dry	1	12/21/2011 2:29:00 PM
4-Chloroaniline	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
4-Chlorophenyl Phenyl Ether	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside recovery limits		

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-1
Lab Order:	1112187	**Collection Date:**	12/15/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-001	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS - SW8270C						Analyst: **ZYZ**
Prep Method: (SW3545A)			**Prep Date:**	**12/21/2011 2:57:56 PM**		
4-Nitroaniline	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
4-Nitrophenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Acenaphthene	*578*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Acenaphthylene	*739*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Acetophenone	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Aniline	ND	568		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Anthracene	*1930*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Azobenzene	ND	568		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Benz(a)Anthracene	*4220*	11.4		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Benzo(a)Pyrene	*3790*	11.4		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Benzo(b)Fluoranthene	*4260*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Benzo(g,h,i)Perylene	*2250*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Benzo(k)Fluoranthene	*2430*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Benzyl Alcohol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Bis(2-Chloroethoxy)Methane	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Bis(2-Chloroethyl)Ether	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Bis(2-Chloroisopropyl)Ether	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Bis(2-Ethylhexyl)Phthalate	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Butyl Benzyl Phthalate	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Carbazole	*712*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Chrysene	*4120*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Dibenz(a,h)Anthracene	*238*	11.4		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Dibenzofuran	*532*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Diethyl Phthalate	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Dimethyl Phthalate	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Di-n-Butyl Phthalate	ND	568		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Di-n-Octyl Phthalate	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Fluoranthene	*7670*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Fluorene	*706*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Hexachlorobenzene	ND	11.4		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Hexachlorobutadiene	ND	11.4		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Hexachlorocyclopentadiene	ND	568		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Hexachloroethane	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Indeno(1,2,3-cd)Pyrene	*2120*	11.4		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Isophorone	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Naphthalene	*1100*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- BRL Below Reporting Limit
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

ANALYTICAL REPORT

Reported Date: 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-1
Lab Order:	1112187	**Collection Date:**	12/15/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-001	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS - SW8270C						Analyst: **ZYZ**
Prep Method: (SW3545A)			**Prep Date:**	**12/21/2011 2:57:56 PM**		
Nitrobenzene	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
N-Nitrosodimethylamine	ND	568		µg/Kg-dry	1	12/21/2011 2:29:00 PM
N-Nitrosodi-n-Propylamine	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
N-Nitrosodiphenylamine	ND	568		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Pentachlorophenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Phenanthrene	*5770*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Phenol	ND	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Pyrene	*7710*	114		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Pyridine	ND	568		µg/Kg-dry	1	12/21/2011 2:29:00 PM
Surr: 2,4,6-Tribromophenol	74.0	30-130		%REC	1	12/21/2011 2:29:00 PM
Surr: 2-Fluorobiphenyl	42.6	30-130		%REC	1	12/21/2011 2:29:00 PM
Surr: 2-Fluorophenol	23.1	30-130	S	%REC	1	12/21/2011 2:29:00 PM
Surr: Nitrobenzene-d5	41.4	30-130		%REC	1	12/21/2011 2:29:00 PM
Surr: Phenol-d6	47.5	30-130		%REC	1	12/21/2011 2:29:00 PM
Surr: Terphenyl-d14	56.1	30-130		%REC	1	12/21/2011 2:29:00 PM
VOLATILE ORGANIC COMPOUNDS - 8260B						Analyst: **ZC**
Prep Method:			**Prep Date:**			
1,1,1,2-Tetrachloroethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,1,1-Trichloroethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,1,2,2-Tetrachloroethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,1,2-Trichloroethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,1-Dichloroethane	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,1-Dichloroethene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,1-Dichloropropene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,2,3-Trichlorobenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,2,4-Trichlorobenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,2,4-Trimethylbenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,2-Dibromo-3-Chloropropane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,2-Dibromoethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,2-Dichlorobenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,2-Dichloroethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,2-Dichloropropane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,3,5-Trimethylbenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside recovery limits
- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-1
Lab Order:	1112187	**Collection Date:**	12/15/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-001	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS - 8260B						Analyst: ZC
Prep Method:		**Prep Date:**				
1,3-Dichlorobenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,3-Dichloropropane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
1,4-Dichlorobenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
2,2-Dichloropropane	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
2-Butanone	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
2-Chloroethyl Vinyl Ether	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
2-Chlorotoluene	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
2-Hexanone	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
2-Methoxy-2-Methylbutane (TAME)	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
4-Chlorotoluene	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
4-Isopropyltoluene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
4-Methyl-2-Pentanone	*57.4*	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Acetone	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Acrylonitrile	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Benzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Bromobenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Bromochloromethane	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Bromodichloromethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Bromoform	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Bromomethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Carbon Disulfide	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Carbon Tetrachloride	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Chlorobenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Chloroethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Chloroform	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Chloromethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
cis-1,2-Dichloroethene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
cis-1,3-Dichloropropene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Dibromochloromethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Dibromomethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Dichlorodifluoromethane	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Diethyl Ether	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Diisopropyl Ether	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Ethylbenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Ethyl-t-Butyl Ether	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Hexachlorobutadiene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- BRL Below Reporting Limit
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-1
Lab Order:	1112187	**Collection Date:**	12/15/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-001	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS - 8260B						Analyst: **ZC**
Prep Method:		**Prep Date:**				
Isopropylbenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Methyl Tert-Butyl Ether	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Methylene Chloride	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Naphthalene	*499*	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
n-Butylbenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
n-Propylbenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
sec-Butylbenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Styrene	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
tert-Butylbenzene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Tetrachloroethene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Tetrahydrofuran	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Toluene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
trans-1,2-Dichloroethene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
trans-1,3-Dichloropropene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Trichloroethene	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Trichlorofluoromethane	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Vinyl Chloride	ND	56.8		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Xylenes, Total	ND	142		µg/Kg-dry	1	12/19/2011 7:18:00 PM
Surr: 1,2-Dichloroethane-d4	87.8	70-130		%REC	1	12/19/2011 7:18:00 PM
Surr: 4-Bromofluorobenzene	83.6	70-130		%REC	1	12/19/2011 7:18:00 PM
Surr: Dibromofluoromethane	81.8	70-130		%REC	1	12/19/2011 7:18:00 PM
Surr: Toluene-d8	101	70-130		%REC	1	12/19/2011 7:18:00 PM
SPECIFIC CONDUCTANCE - E120.1						Analyst: **RP**
Prep Method:		**Prep Date:**				
Specific Conductance	*460*	1.00		µmhos/cm	1	12/20/2011
CYANIDE, REACTIVE - SW7.3.3.2						Analyst: **RP**
Prep Method:		**Prep Date:**				
Reactive Cyanide	ND	0.114		mg/Kg-dry	1	12/19/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside recovery limits		

ANALYTICAL REPORT

Reported Date: 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-1
Lab Order:	1112187	**Collection Date:**	12/15/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-001	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
SULFIDE, REACTIVE - SW7.3.4.2						Analyst: **RP**
Prep Method:			**Prep Date:**			
Reactive Sulfide	ND	0.284		mg/Kg-dry	1	12/19/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside recovery limits		

GeoLabs, Inc.
45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

ANALYTICAL REPORT

Reported Date: 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-2
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-002	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
TOTAL PETROLEUM HYDROCARBONS - 8100M						Analyst: **Jsi**
Prep Method: (8100M)			**Prep Date: 12/21/2011 1:49:13 PM**			
Total Petroleum Hydrocarbons	ND	54.9		mg/Kg-dry	1	12/19/2011
Surr: o-Terphenyl	80.5	40-140		%REC	1	12/19/2011
POLYCHLORINATED BIPHENYLS - SW8082						Analyst: **KG**
Prep Method: (SW3545A)			**Prep Date: 12/21/2011 3:19:04 PM**			
Aroclor 1016	ND	54.9		µg/Kg-dry	1	12/22/2011
Aroclor 1221	ND	110		µg/Kg-dry	1	12/22/2011
Aroclor 1232	ND	54.9		µg/Kg-dry	1	12/22/2011
Aroclor 1242	ND	54.9		µg/Kg-dry	1	12/22/2011
Aroclor 1248	ND	54.9		µg/Kg-dry	1	12/22/2011
Aroclor 1254	*198*	54.9		µg/Kg-dry	1	12/22/2011
Aroclor 1260	ND	54.9		µg/Kg-dry	1	12/22/2011
Surr: Decachlorobiphenyl Sig 1	84.2	30-150		%REC	1	12/22/2011
Surr: Decachlorobiphenyl Sig 2	87.1	30-150		%REC	1	12/22/2011
Surr: Tetrachloro-m-Xylene Sig 1	83.3	30-150		%REC	1	12/22/2011
Surr: Tetrachloro-m-Xylene Sig 2	87.4	30-150		%REC	1	12/22/2011
MERCURY - SW7471A						Analyst: **EC**
Prep Method: (SW7471A)			**Prep Date: 12/20/2011 2:49:16 PM**			
Mercury	ND	0.275		mg/Kg-dry	1	12/20/2011
RCRA METALS W/O HG - SW6010B						Analyst: **QS**
Prep Method: (SW3050B)			**Prep Date: 12/21/2011 12:51:50 PM**			
Arsenic	ND	5.42		mg/Kg-dry	1	12/21/2011
Barium	*43.8*	5.42		mg/Kg-dry	1	12/21/2011
Cadmium	ND	1.08		mg/Kg-dry	1	12/21/2011
Chromium	*15.8*	5.42		mg/Kg-dry	1	12/21/2011
Lead	*157*	5.42		mg/Kg-dry	1	12/21/2011
Selenium	ND	5.42		mg/Kg-dry	1	12/21/2011
Silver	ND	10.8		mg/Kg-dry	1	12/21/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside recovery limits		

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-2
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-002	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
TCLP LEAD - 6010B						Analyst: **QS**
Prep Method: (SW3010A)			**Prep Date:**	12/22/2011 12:09:08 PM		
Lead	*0.910*	0.0500		mg/L	5	12/22/2011
SEMIVOLATILE ORGANICS - SW8270C						Analyst: **ZYZ**
Prep Method: (SW3545A)			**Prep Date:**	12/21/2011 2:57:56 PM		
1,1'-Biphenyl	ND	11.0		µg/Kg-dry	1	12/21/2011 3:05:00 PM
1,2,4-Trichlorobenzene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
1,2-Dichlorobenzene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
1,2-Dinitrobenzene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
1,3-Dichlorobenzene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
1,3-Dinitrobenzene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
1,4-Dichlorobenzene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
1,4-Dinitrobenzene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2,3,4,6-Tetrachlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2,4,5-Trichlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2,4,6-Trichlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2,4-Dichlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2,4-Dimethylphenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2,4-Dinitrophenol	ND	549		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2,4-Dinitrotoluene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2,6-Dinitrotoluene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2-Chloronaphthalene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2-Chlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2-Methylnaphthalene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2-Methylphenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2-Nitroaniline	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
2-Nitrophenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
3,3'-Dichlorobenzidine	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
3-Methylphenol/4-Methylphenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
3-Nitroaniline	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
4,6-Dinitro-2-Methylphenol	ND	549		µg/Kg-dry	1	12/21/2011 3:05:00 PM
4-Bromophenyl Phenyl Ether	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
4-Chloro-3-Methylphenol	ND	549		µg/Kg-dry	1	12/21/2011 3:05:00 PM
4-Chloroaniline	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
4-Chlorophenyl Phenyl Ether	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside recovery limits
- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-2
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-002	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS - SW8270C						Analyst: ZYZ
Prep Method: (SW3545A)			**Prep Date:**	**12/21/2011 2:57:56 PM**		
4-Nitroaniline	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
4-Nitrophenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Acenaphthene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Acenaphthylene	*116*	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Acetophenone	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Aniline	ND	549		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Anthracene	*323*	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Azobenzene	ND	549		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Benz(a)Anthracene	*536*	11.0		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Benzo(a)Pyrene	*674*	11.0		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Benzo(b)Fluoranthene	*740*	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Benzo(g,h,i)Perylene	*366*	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Benzo(k)Fluoranthene	*579*	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Benzyl Alcohol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Bis(2-Chloroethoxy)Methane	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Bis(2-Chloroethyl)Ether	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Bis(2-Chloroisopropyl)Ether	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Bis(2-Ethylhexyl)Phthalate	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Butyl Benzyl Phthalate	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Carbazole	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Chrysene	*637*	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Dibenz(a,h)Anthracene	ND	11.0		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Dibenzofuran	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Diethyl Phthalate	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Dimethyl Phthalate	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Di-n-Butyl Phthalate	ND	549		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Di-n-Octyl Phthalate	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Fluoranthene	*1140*	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Fluorene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Hexachlorobenzene	ND	11.0		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Hexachlorobutadiene	ND	11.0		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Hexachlorocyclopentadiene	ND	549		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Hexachloroethane	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Indeno(1,2,3-cd)Pyrene	*350*	11.0		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Isophorone	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Naphthalene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- BRL Below Reporting Limit
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

ANALYTICAL REPORT

Reported Date: 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-2
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-002	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS - SW8270C						Analyst: **ZYZ**
Prep Method: (SW3545A)			**Prep Date:**	**12/21/2011 2:57:56 PM**		
Nitrobenzene	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
N-Nitrosodimethylamine	ND	549		µg/Kg-dry	1	12/21/2011 3:05:00 PM
N-Nitrosodi-n-Propylamine	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
N-Nitrosodiphenylamine	ND	549		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Pentachlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Phenanthrene	*860*	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Phenol	ND	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Pyrene	*1170*	110		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Pyridine	ND	549		µg/Kg-dry	1	12/21/2011 3:05:00 PM
Surr: 2,4,6-Tribromophenol	83.1	30-130		%REC	1	12/21/2011 3:05:00 PM
Surr: 2-Fluorobiphenyl	57.0	30-130		%REC	1	12/21/2011 3:05:00 PM
Surr: 2-Fluorophenol	24.2	30-130	S	%REC	1	12/21/2011 3:05:00 PM
Surr: Nitrobenzene-d5	46.6	30-130		%REC	1	12/21/2011 3:05:00 PM
Surr: Phenol-d6	49.0	30-130		%REC	1	12/21/2011 3:05:00 PM
Surr: Terphenyl-d14	61.4	30-130		%REC	1	12/21/2011 3:05:00 PM
VOLATILE ORGANIC COMPOUNDS - 8260B						Analyst: **ZC**
Prep Method:			**Prep Date:**			
1,1,1,2-Tetrachloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,1,1-Trichloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,1,2,2-Tetrachloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,1,2-Trichloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,1-Dichloroethane	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,1-Dichloroethene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,1-Dichloropropene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,2,3-Trichlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,2,4-Trichlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,2,4-Trimethylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,2-Dibromo-3-Chloropropane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,2-Dibromoethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,2-Dichlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,2-Dichloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,2-Dichloropropane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,3,5-Trimethylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- BRL Below Reporting Limit
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-2
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-002	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS - 8260B						Analyst: ZC
Prep Method:		**Prep Date:**				
1,3-Dichlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,3-Dichloropropane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
1,4-Dichlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
2,2-Dichloropropane	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
2-Butanone	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
2-Chloroethyl Vinyl Ether	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
2-Chlorotoluene	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
2-Hexanone	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
2-Methoxy-2-Methylbutane (TAME)	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
4-Chlorotoluene	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
4-Isopropyltoluene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
4-Methyl-2-Pentanone	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Acetone	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Acrylonitrile	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Benzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Bromobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Bromochloromethane	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Bromodichloromethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Bromoform	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Bromomethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Carbon Disulfide	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Carbon Tetrachloride	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Chlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Chloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Chloroform	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Chloromethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
cis-1,2-Dichloroethene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
cis-1,3-Dichloropropene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Dibromochloromethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Dibromomethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Dichlorodifluoromethane	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Diethyl Ether	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Diisopropyl Ether	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Ethylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Ethyl-t-Butyl Ether	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Hexachlorobutadiene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- BRL Below Reporting Limit
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

ANALYTICAL REPORT

Reported Date: 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-2
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-002	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS - 8260B						Analyst: **ZC**
Prep Method:		**Prep Date:**				
Isopropylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Methyl Tert-Butyl Ether	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Methylene Chloride	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Naphthalene	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
n-Butylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
n-Propylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
sec-Butylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Styrene	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
tert-Butylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Tetrachloroethene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Tetrahydrofuran	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Toluene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
trans-1,2-Dichloroethene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
trans-1,3-Dichloropropene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Trichloroethene	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Trichlorofluoromethane	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Vinyl Chloride	ND	54.9		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Xylenes, Total	ND	137		µg/Kg-dry	1	12/19/2011 7:51:00 PM
Surr: 1,2-Dichloroethane-d4	85.2	70-130		%REC	1	12/19/2011 7:51:00 PM
Surr: 4-Bromofluorobenzene	84.6	70-130		%REC	1	12/19/2011 7:51:00 PM
Surr: Dibromofluoromethane	82.6	70-130		%REC	1	12/19/2011 7:51:00 PM
Surr: Toluene-d8	101	70-130		%REC	1	12/19/2011 7:51:00 PM
SPECIFIC CONDUCTANCE - E120.1						Analyst: **RP**
Prep Method:		**Prep Date:**				
Specific Conductance	*172*	1.00		µmhos/cm	1	12/20/2011
CYANIDE, REACTIVE - SW7.3.3.2						Analyst: **RP**
Prep Method:		**Prep Date:**				
Reactive Cyanide	ND	0.110		mg/Kg-dry	1	12/19/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside recovery limits		

ANALYTICAL REPORT

Reported Date: 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-2
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-002	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
SULFIDE, REACTIVE - SW7.3.4.2						Analyst: **RP**
Prep Method:			**Prep Date:**			
Reactive Sulfide	ND	0.275		mg/Kg-dry	1	12/19/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside recovery limits		

GeoLabs, Inc.
45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-3
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-003	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
TOTAL PETROLEUM HYDROCARBONS - 8100M						Analyst: **Jsi**
Prep Method: (8100M)		**Prep Date: 12/21/2011 1:49:13 PM**				
Total Petroleum Hydrocarbons	*59.9*	54.9		mg/Kg-dry	1	12/19/2011
Surr: o-Terphenyl	76.7	40-140		%REC	1	12/19/2011
POLYCHLORINATED BIPHENYLS - SW8082						Analyst: **KG**
Prep Method: (SW3545A)		**Prep Date: 12/21/2011 3:19:04 PM**				
Aroclor 1016	ND	54.9		µg/Kg-dry	1	12/22/2011
Aroclor 1221	ND	110		µg/Kg-dry	1	12/22/2011
Aroclor 1232	ND	54.9		µg/Kg-dry	1	12/22/2011
Aroclor 1242	ND	54.9		µg/Kg-dry	1	12/22/2011
Aroclor 1248	ND	54.9		µg/Kg-dry	1	12/22/2011
Aroclor 1254	*80.0*	54.9		µg/Kg-dry	1	12/22/2011
Aroclor 1260	ND	54.9		µg/Kg-dry	1	12/22/2011
Surr: Decachlorobiphenyl Sig 1	78.6	30-150		%REC	1	12/22/2011
Surr: Decachlorobiphenyl Sig 2	72.7	30-150		%REC	1	12/22/2011
Surr: Tetrachloro-m-Xylene Sig 1	68.5	30-150		%REC	1	12/22/2011
Surr: Tetrachloro-m-Xylene Sig 2	67.9	30-150		%REC	1	12/22/2011
MERCURY - SW7471A						Analyst: **EC**
Prep Method: (SW7471A)		**Prep Date: 12/20/2011 2:49:16 PM**				
Mercury	ND	0.275		mg/Kg-dry	1	12/20/2011
RCRA METALS W/O HG - SW6010B						Analyst: **QS**
Prep Method: (SW3050B)		**Prep Date: 12/21/2011 12:51:50 PM**				
Arsenic	ND	5.39		mg/Kg-dry	1	12/21/2011
Barium	*47.1*	5.39		mg/Kg-dry	1	12/21/2011
Cadmium	ND	1.08		mg/Kg-dry	1	12/21/2011
Chromium	*15.4*	5.39		mg/Kg-dry	1	12/21/2011
Lead	*131*	5.39		mg/Kg-dry	1	12/21/2011
Selenium	ND	5.39		mg/Kg-dry	1	12/21/2011
Silver	ND	10.8		mg/Kg-dry	1	12/21/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside recovery limits		

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-3
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-003	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
TCLP LEAD - 6010B						Analyst: **QS**
Prep Method: (SW3010A)			**Prep Date:**	12/22/2011 12:09:08 PM		
Lead	*0.560*	0.0500		mg/L	5	12/22/2011
SEMIVOLATILE ORGANICS - SW8270C						Analyst: **ZYZ**
Prep Method: (SW3545A)			**Prep Date:**	12/21/2011 2:57:56 PM		
1,1'-Biphenyl	ND	11.0		µg/Kg-dry	1	12/21/2011 4:19:00 PM
1,2,4-Trichlorobenzene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
1,2-Dichlorobenzene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
1,2-Dinitrobenzene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
1,3-Dichlorobenzene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
1,3-Dinitrobenzene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
1,4-Dichlorobenzene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
1,4-Dinitrobenzene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2,3,4,6-Tetrachlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2,4,5-Trichlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2,4,6-Trichlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2,4-Dichlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2,4-Dimethylphenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2,4-Dinitrophenol	ND	549		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2,4-Dinitrotoluene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2,6-Dinitrotoluene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2-Chloronaphthalene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2-Chlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2-Methylnaphthalene	*335*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2-Methylphenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2-Nitroaniline	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
2-Nitrophenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
3,3'-Dichlorobenzidine	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
3-Methylphenol/4-Methylphenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
3-Nitroaniline	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
4,6-Dinitro-2-Methylphenol	ND	549		µg/Kg-dry	1	12/21/2011 4:19:00 PM
4-Bromophenyl Phenyl Ether	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
4-Chloro-3-Methylphenol	ND	549		µg/Kg-dry	1	12/21/2011 4:19:00 PM
4-Chloroaniline	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
4-Chlorophenyl Phenyl Ether	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside recovery limits
- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-3
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-003	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS - SW8270C						Analyst: **ZYZ**
Prep Method: (SW3545A)			**Prep Date:**	**12/21/2011 2:57:56 PM**		
4-Nitroaniline	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
4-Nitrophenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Acenaphthene	*675*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Acenaphthylene	*590*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Acetophenone	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Aniline	ND	549		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Anthracene	*2910*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Azobenzene	ND	549		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Benz(a)Anthracene	*3530*	11.0		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Benzo(a)Pyrene	*3310*	11.0		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Benzo(b)Fluoranthene	*2520*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Benzo(g,h,i)Perylene	*1340*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Benzo(k)Fluoranthene	*2240*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Benzyl Alcohol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Bis(2-Chloroethoxy)Methane	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Bis(2-Chloroethyl)Ether	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Bis(2-Chloroisopropyl)Ether	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Bis(2-Ethylhexyl)Phthalate	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Butyl Benzyl Phthalate	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Carbazole	*652*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Chrysene	*3160*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Dibenz(a,h)Anthracene	*103*	11.0		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Dibenzofuran	*620*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Diethyl Phthalate	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Dimethyl Phthalate	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Di-n-Butyl Phthalate	ND	549		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Di-n-Octyl Phthalate	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Fluoranthene	*7770*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Fluorene	*1090*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Hexachlorobenzene	ND	11.0		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Hexachlorobutadiene	ND	11.0		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Hexachlorocyclopentadiene	ND	549		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Hexachloroethane	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Indeno(1,2,3-cd)Pyrene	*1450*	11.0		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Isophorone	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Naphthalene	*512*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside recovery limits		

ANALYTICAL REPORT

Reported Date: 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-3
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-003	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS - SW8270C						Analyst: **ZYZ**
Prep Method: (SW3545A)			**Prep Date:**	**12/21/2011 2:57:56 PM**		
Nitrobenzene	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
N-Nitrosodimethylamine	ND	549		µg/Kg-dry	1	12/21/2011 4:19:00 PM
N-Nitrosodi-n-Propylamine	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
N-Nitrosodiphenylamine	ND	549		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Pentachlorophenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Phenanthrene	*8010*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Phenol	ND	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Pyrene	*6880*	110		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Pyridine	ND	549		µg/Kg-dry	1	12/21/2011 4:19:00 PM
Surr: 2,4,6-Tribromophenol	75.3	30-130		%REC	1	12/21/2011 4:19:00 PM
Surr: 2-Fluorobiphenyl	52.0	30-130		%REC	1	12/21/2011 4:19:00 PM
Surr: 2-Fluorophenol	23.2	30-130	S	%REC	1	12/21/2011 4:19:00 PM
Surr: Nitrobenzene-d5	40.0	30-130		%REC	1	12/21/2011 4:19:00 PM
Surr: Phenol-d6	48.3	30-130		%REC	1	12/21/2011 4:19:00 PM
Surr: Terphenyl-d14	53.8	30-130		%REC	1	12/21/2011 4:19:00 PM
VOLATILE ORGANIC COMPOUNDS - 8260B						Analyst: **ZC**
Prep Method:			**Prep Date:**			
1,1,1,2-Tetrachloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,1,1-Trichloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,1,2,2-Tetrachloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,1,2-Trichloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,1-Dichloroethane	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,1-Dichloroethene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,1-Dichloropropene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,2,3-Trichlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,2,4-Trichlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,2,4-Trimethylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,2-Dibromo-3-Chloropropane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,2-Dibromoethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,2-Dichlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,2-Dichloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,2-Dichloropropane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,3,5-Trimethylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside recovery limits
- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-3
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-003	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS - 8260B						Analyst: ZC
Prep Method:		**Prep Date:**				
1,3-Dichlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,3-Dichloropropane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
1,4-Dichlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
2,2-Dichloropropane	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
2-Butanone	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
2-Chloroethyl Vinyl Ether	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
2-Chlorotoluene	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
2-Hexanone	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
2-Methoxy-2-Methylbutane (TAME)	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
4-Chlorotoluene	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
4-Isopropyltoluene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
4-Methyl-2-Pentanone	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Acetone	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Acrylonitrile	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Benzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Bromobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Bromochloromethane	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Bromodichloromethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Bromoform	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Bromomethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Carbon Disulfide	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Carbon Tetrachloride	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Chlorobenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Chloroethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Chloroform	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Chloromethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
cis-1,2-Dichloroethene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
cis-1,3-Dichloropropene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Dibromochloromethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Dibromomethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Dichlorodifluoromethane	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Diethyl Ether	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Diisopropyl Ether	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Ethylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Ethyl-t-Butyl Ether	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Hexachlorobutadiene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- BRL Below Reporting Limit
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

ANALYTICAL REPORT **Reported Date:** 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-3
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-003	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS - 8260B						Analyst: **ZC**
Prep Method:		**Prep Date:**				
Isopropylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Methyl Tert-Butyl Ether	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Methylene Chloride	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Naphthalene	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
n-Butylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
n-Propylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
sec-Butylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Styrene	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
tert-Butylbenzene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Tetrachloroethene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Tetrahydrofuran	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Toluene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
trans-1,2-Dichloroethene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
trans-1,3-Dichloropropene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Trichloroethene	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Trichlorofluoromethane	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Vinyl Chloride	ND	54.9		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Xylenes, Total	ND	137		µg/Kg-dry	1	12/19/2011 8:22:00 PM
Surr: 1,2-Dichloroethane-d4	84.3	70-130		%REC	1	12/19/2011 8:22:00 PM
Surr: 4-Bromofluorobenzene	83.3	70-130		%REC	1	12/19/2011 8:22:00 PM
Surr: Dibromofluoromethane	80.8	70-130		%REC	1	12/19/2011 8:22:00 PM
Surr: Toluene-d8	101	70-130		%REC	1	12/19/2011 8:22:00 PM
SPECIFIC CONDUCTANCE - E120.1						Analyst: **RP**
Prep Method:		**Prep Date:**				
Specific Conductance	*300*	1.00		µmhos/cm	1	12/20/2011
CYANIDE, REACTIVE - SW7.3.3.2						Analyst: **RP**
Prep Method:		**Prep Date:**				
Reactive Cyanide	ND	0.110		mg/Kg-dry	1	12/19/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside recovery limits		

ANALYTICAL REPORT

Reported Date: 22-Dec-11

CLIENT:	EST	**Client Sample ID:**	TP-3
Lab Order:	1112187	**Collection Date:**	12/16/2011 8:00:00 AM
Project:	Somerville Ice Rink	**Date Received:**	12/16/2011
Lab ID:	1112187-003	**Matrix:**	SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
SULFIDE, REACTIVE - SW7.3.4.2						Analyst: **RP**
Prep Method:			**Prep Date:**			
Reactive Sulfide	ND	0.275		mg/Kg-dry	1	12/19/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside recovery limits		

GeoLabs, Inc.
45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

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CHAIN OF CUSTODY RECORD

GeoLabs, Inc. *Environmental Laboratories*
45 Johnson Lane, Braintree, MA 02184
p 781.848.7844 • f 781.848.7811
www.geolabs.com

Sample Handling: circle choice
Filtration: Done / Not Needed / Lab to do
Preservation: Lab to do Y / N

Special Instructions

Turnaround: circle one — 1-day, 3-day, 2-day, (5/7-days)

Data Delivery: circle choice (s) — Fax, (email), Format:, Excel, PDF

Requirements: circle choice (s) — GW-1, (S-1), QC, MCP Methods, DEP, Other ____, CT RCP (Reasonable Confidence Protocols), State / Fed Program - Criteria ____

Client: EST
Address: Needham MA
Contact: Mike Burdy

Phone: 781-292-2791
Fax:
email: mburdy@ESTassociates.com

Project: Somerville Ice Rink
Project PO:
Invoice to *:

Preserative:

DATE	TIME	SAMPLED BY	SAMPLE LOCATION / ID	TYPE	QUANITY	MATRIX	COMP	GRAB	GeoLabs SAMPLE NUMBER	VOCS	SVOCS	PCBs	TPH	RCRA 8 Metals	Reactivity	Conductivity		TEMPERATURE	LAB pH
12/15	0800	MB	TP-1	G	4	S	X		12187-001	X	X	/	/	X	X	X		9.4°	–
↓		↓	TP-2	G	4	S	X		-002	X	X	X	X	X	X	X		↓	–
↓		↓	TP-3	G	4	S	X		-003	X	X	X	X	X	X	X			–

Matrix Codes:
GW = Ground Water; WW = Waste Water; DW = Drinking Water; SL = Sludge; S = Soil; O = Oil; A = Air; OT = Other

Received on Ice ☑

Preservatives
1 = Hcl; 2 = HNO3; 3 = H2SO4; 4 = Na2S2O3; 5 = NaOH; 6 = MEOH; 7 = Other

Containers:
A = Amber; G = Glass; S = Summa; B = Bag; P = Plastic; V = Voa; O = Other

Relinquished by:	Date / Time	Received by:	Date / Time
M Burdy	12/16/11	Ken McKeown	12/16/11 2:35
[signature]	12/16/11 3:45	Danielle Ross	12/16/11 3:45

2010730.J&P.C of CR.09/22/10

* Terms: Payment due within 30 days unless other arrangements are made. Past due balances subject to interest and collection cost.
Note: Homeowners and Law Firms must pay when dropping off samples. We accept cash, check and credit cards.

CT (PH-0148) NH (2508) NJ (MA-009) RI (LA000252) ME (MA - 0015)